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Mental content in drawing.

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Thesis

MENTAL CONTENT IN DRAWING

Submitted by
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In partial fulfillment of requirements for the
degree of Master of Education

1930

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INCENTIVES FOR THE STUDY

For several years the present observer has felt that a study might profitably be made of the mental processes of the individual child during drawing. Upon analyzing this feeling the following questions seemed important:

1. What does the child think while drawing?
2. How much, and what kind of thought does he give to the development of his drawing?
3. What are his reasons for thinking that way?
4. Are we making good use of the knowledge, interests, and ability that the child already has?
5. What can the director of drawing do to make the mental process more profitable and more pleasurable?

This study deals principally with drawings of Grade one and Grade two children. It seems to be the field where drawing is first ready for cultivation. With few exceptions the drawing is all free expression, since one of the aims is to find out child interests. With free creative expression as a focus for our attention, and with the loose interpretations that this phrase is receiving, it seems necessary to make studies which will give us a better understanding of how free the expression may be to be most creative in the constructive and lasting sense of the word. Has the child freedom of expression when he is left to his own initiative and resources, or will he have more

lasting and wholesome freedom by having timely help, criticism, guidance, and inspiration from one who is acquainted with the disabilities and assets, and stands by to aid in developing thru the avenue of drawing?

Soon after this study was begun the observer came upon the following comment by Professor Dewey:

"We have plenty of glorification of "Art," and of the importance of artistic meaning, but we have almost no definite scientific attempt to translate the artistic processes into terms of its psychical machinery, that is, of the mental processes which occasion and which affect such expression."

This statement was like a refreshing shower to a struggling little seedling. Surely, to know the mental processes one must know as much as is possible about the child's interests and experiences. These give us a working basis for understanding and analyzing the mental content revealed thru intimate conversation, and observation of motor processes -, two methods which were used for the present study.

All previous studies, which have been made of drawings by children, tend toward the scientific, but they do not consider anything but finished drawings. The process has been completed, and the product read and rated without a knowledge of the varied motives and reactions which accompanied the making. We need to know the attitude back of the act.

METHOD OF THE STUDY

Prerequisite Data
Mental Content in Drawing
Intelligence Tests –
Home Interests and Environment

METHOD OF THE STUDY

The main question is: Does a knowledge of the child's background and mental life make any appreciable difference to the drawing director?

The following method was adopted as a possible means of answering the above question:

A. 1. To aim to get the "mental content" of at least 5 drawings from each of 25 Grade I children during the year. Follow up these children for another year, even if retarded.
  2. During the second year add to the study 25 more Grade I children from another school for variety of interests and environment.

B. 1. Prepare a "Little Blue Book" to hold information concerning each childs' interests, experiences, and traits.
  2. Visit the homes and talk with parents about the study, and information desired.

C. 1. Give the Goodenough Intelligence Test
  2. Compare results of Goodenough, Detroit, and Rhode Island tests, in an endeavor to discover if the Goodenough is more reliable as a special ability test, or as a general intelligence test.
  3. If test results do not nearly agree use the Stanford Revision of the Binet-Simon.

D. 1. Tabulate any possibly relevant information.
  2. Tabulate analysis of drawings by "mental content."
  3. Tabulate findings of home interests & environment.

E. 1. Find possible bearings of D 1.2.3. upon each other:

PREREQUISITE DATA

Note that this study was carried on in two schools which for convenience have been called throughout the study Schools A and B.

The Grade I in School A - 1928-1929, where and when this study was begun, numbered over fifty. Art ability and intelligence did not have much bearing upon the choice of twenty-five for this study. As the girls outnumbered the boys in the class over three to one, most of the boys were included in the study. Nationalities were also each represented.

The first year, the children were tested for intelligence and their homes were visited, but as there were periods when both observed and observer succumbed to illness, little progress was made in getting drawings for analysis of "mental content." It was deemed wisest to continue with this part of the study the following year. The same children were available with but four exceptions. This change is noted on Table , on which is giving Prerequisite Data for 1929-1930, the Second Year or Grade II. Pupils numbered 11, 22, 23 and 24 tho retained in Grade I were part of the study, and found to be interesting.

In School B, as there were but twenty-six pupils in Grade I, at the beginning of the year, all were included. One left during the year, so that twenty-five yet remained.

The Prerequisite Data shown on the tables which follow consists of knowledge which any teacher has on file, and was kindly contributed.

School A

PREREQUISITE DATA

GRADE I - 1928-1929.

–Table 1–

NUMB'R	PUPIL	SEX	KINDER GARTEN	AGE OCT-1928 YRS.-MOS.	NATIONALITY	PARENT'S OCCUPATION	HANDED
1	V.A.	F	K	5 - 3	Amer.	teller	right
2	R.B	"	"	5 - 9	French	shoemaker	"
3	C.B	"	—	6 - 2	"	diver	"
4	A.C	"	K	5 - 1	Amer.	customs inspector	"
5	P.C	"	"	5 - 4	"	secretary	left
6	A.D	"	"	5 - 10	French	carpenter	right
7	E.G.	"	"	5 - 11	"	expressman	"
8	B.G	"	"	5 - 2	Amer.	auditor	"
9	G.J	"	—	6 - 0	"	construction manager	"
10	F.L	"	—	7 - 1	"	conductor	left
11	A.M	"	K	5 - 2	"	salesman	mirror writer
12	J.P	"	"	6 - 0	"	electrician	right
13	R.R	"	"	6 - 5	French	chauffeur	"
14	G.R	"	"	6 - 0	Amer.	machinist	"
15	C.S	"	"	5 - 5	"	gardener	mirror writer
16	Lr.T	"	K	5 - 3	"	shoemaker	right
17	L.T	"	"	5 - 3	"	"	mirror writer
18	B.W	"	"	5 - 11	"	sign painter	right
19	R.A	M	—	5 - 2	"	bank clerk	left
20	R.B	"	—	7 - 4	French		"
21	B.C	"	K	5 - 3	"	meat cutter	right
22	F.Di	"	—	5 - 2	Italian	mason	"
23	A.K	"	K	5 - 0	Greek	shoemaker	"
24	R.L	"	"	5 - 5	Amer.	contractor	"
25	G.R	"	"	5 - 9	"	Dry Goods Mer.	"

School A

PREREQUISITE DATA.

SECOND YEAR - 1929 - 1930

- Table 2 -

NUMB'R	PUPIL	SEX	KINDER GARTEN	AGE OCT 1. 1929 YRS - MOS.	NATIONALITY	PARENT'S OCCUPATION	HANDED
1	V.A	F	K	6 - 3	Amer.	teller	right
2	C.B	"	—	7 - 2	French	diver	"
3	A.C	"	K	6 - 1	Amer.	customs insp.	"
4	P.C	"	"	6 - 4	"	secretary	left
5	A.D	"	"	6 - 10	French	carpenter	
+ 6	A.Di	"		7 - 4	Italian	mason	"
7	E.G	"		6 - 11	French	expressman	"
8	B.G	"	"	6 - 2	Amer.	auditor	"
9	G.J	"	—	7 - 0	"	construction manager	"
10	F.L	"	—	8 - 1	"	conductor	left
11	A.M	"	K	6 - 2	"	salesman	mirror writer
12	J.P	"	"	7 - 0	French	electrician	"
+ 13	J.Po	"	—	6 - 0	French	salesman	"
14	R.R	"	K	7 - 5	"	chauffeur	"
15	G.R	"	"	7 - 0	Amer.	machinist	"
16	C.S	"	—	6 - 5	"	gardener	mirror writer
17	L.T	"	K	6 - 3	"	shoemaker	right
18	L.T	"	"	6 - 3	"	" "	mirror writer
19	B.W	"	"	6 - 11	"	sign painter	right
20	R.A	M	—	6 - 2	"	bank clerk	left
21	R.B	"	—	8 - 4	French		right
22	F.Di	"	—	6 - 2	Italian	mason	left
23	A.K	"	K	6 - 0	Greek	shoemaker	right
+24	C.M	"	"	6 - 4	Amer.	contractor	"
+25	C.S	"		8 - 10		garageman	"

School B

PREREQUISITE DATA

GRADE I - 1929-1930

-Table 3-

NUMB'R	PUPIL	SEX	KINDER GARTEN	AGE OCT. 1. 1929 YRS.- MOS.	NATIONALITY	PARENTS OCCUPATION	HANDED
1.	R.C	F	K	5 - 0	French	mason tender	right
2.	P.F	"	—	5 - 7	"	cabinet worker	"
3.	M.L	"	K	5 - 9	"	carpenter	"
4	R.L	"	—	5 - 1	"	cobbler	"
5	V.L	"	—	5 - 7	Amer.	machinist	left
6	P.M	"	—	5 - 11	"	electrician	right
7	J.M	"	K	5 - 1	English	manual trng	"
8	D.M	"	·	5 - 6	French	foreman shoe shop	"
9	D.T	"	·	6 - 4	English	carpenter	"
10	M.B	M	"	5 - 8	French	"	"
11	S.B	"	"	5 - 5	Jewish	mfg soft drink	left
12	P.C	"	"	6 - 1	French	radio expert	"
13	A.G	"	"	5 - 9	Russian	tailor	right
14	D.H	"	"	5 - 1	Amer.	salesman	"
15	W.K	"	"	5 - 4	Greek	candystore	"
16	A.L	"	"	5 - 2	French	city worker	"
17	R.L	"	"	5 - 5	"	telephone ope.	"
18	C.L	"	"	6 - 8	"	" "	"
19	H.M	"	"	5 - 3	Russian	malt products	"
20	D.Mc	"	"	6 - 2	Irish	presser	"
21	R.P	"	"	5 - 3	French	shoe cutter	"
22	L.T	"	"	5 - 7	Russian	leather factory	"
23	F.T	"	"	5 - 2	English	carpenter	"
24	G.T	"	"	5 - 7	Amer.	leather worker	"
25	M.W	"	"	5 - 6	Jewish	merchant	"

MENTAL CONTENT IN DRAWING

What they draw

How they draw it

Why they draw it

What they think while drawing

Value of knowing "mental content"

Illustration of studies.

MENTAL CONTENT IN DRAWING

During this study of free expression drawings the observer has wondered much if we are making the best of child interests and child points of view in our outlines of art for use in the elementary grades, and especially in the primary grades. A profitable outline for a primary grade can not be made until the children have had a chance to demonstrate their own individual schema for the drawing of certain objects and events which have their personal interest. Not only mental notes and analyses, but written and charted notes and analyses should be kept. To get the right kind of information each child should be observed individually. The observations will give us our working bases for development. A grade teacher can not be expected to do this alone, any more than an art director may be expected to make a reliable diagnosis for reading outlines. In cooperation with an art director of experience, familiar with methods of education in general, one glad to get away from pedantic methods, this can be done with the insight, naturalness, and brevity which will make the recorded results telling and workable. Several years of follow-up work are needed to bring to the surface values which are here predicted and already discerned by the present study.

The best reading methods are ahead of us in making use of the child's interests and art ability. Drawing need no longer be a detached subject, but neither the grade nor the art teacher can do their

best by working independently.

That talent may be discovered is by no means the chief purpose of a study of "mental content." Rather, the chief purpose is to discover how to perpetuate and make the best use of this great joy of childhood, that both the school and adult life may be enriched. Progressive teachers now deem art a necessity for the successful carrying on of units or problems in other subjects. It is far from visionary to say that every child can find an interest and an ability for some part of a plan involving art. "Mental Content" study reveals these interests and abilities. It is an aid and only fair way to judge and evaluate the interests and abilities. The reason why many boys and girls in the intermediate grades have become discouraged and disinterested is that artist standards were set for them. They rarely had the joy of seeing a finished product displayed which inwardly they could proudly call their own, for it was usually touched up to make it "look nice." Yet these boys and girls can draw, and well, sometimes expressing their ideas in a better and more vivid way than an artist of finished technique.

Then what is needed is to understand better how to guide children in self-expression, self-criticism, and self-development. As a step toward meeting this need the present study was carried thus far.

MENTAL CONTENT METHOD

Choose a child first who is inclined to talk while drawing. Go into an unoccupied room, if possible, where "we may talk all we wish."

The drawing may be "anything you would like to draw" or "anything real hard."

Sit as near right angles as possible, that the process of drawing may be better observed.

Do not write conspicuously to embarrass or attract attention. It may be wise to tell that we are writing the story of the picture, so we won't forget it.

Note intervals of silence. Time them if over half a minute. Usually if silence continues long break it by some remark. The remark must not contain an idea, but an urge to talk, as,- "How is it coming?" "Mind if I peek" "Tell me." Recognize the child's comments by some show of interest. Never convey an idea.

If drawing seems too soon finished encourage further work upon it, but do not urge or suggest.

Date and time the performance.

Pencil or crayon may be used.

Sometimes ask for favorite color. Note it.

Sketch interesting steps in a process or schema.

Occasionally allow the drawing of a second picture if the child requests it. Note the request as interest span.

MENTAL CONTENT IN DRAWING

METHOD OF PROCEDURE

Records were made of:

1. *Dates* drawings were made, to note progress, and if season effected the choice of subject.
2. *Time of* drawing, to note if time of day had any influence on interest or concentration.
3. *Time for* drawing, to note span of interest, and average time needed to complete drawing.

Tables 4 and 5 are the resulting records

Analysis was made of:

1. *Interests* - that is, what subjects were chosen. One check (✓) means that the designated object was drawn once (or more) at one time or drawing period. Then 卌 means that the object designated was drawn at least once at all of the five drawing periods. At a glance we can see what topic proved to be most popular by pupil and by grade.
2. *Traits*, - as revealed by "Analysis of Mental Content," and by observation. The same method has been used for scoring except that a certain trait was credited more than once if shown more than once during one period.

Tables 6 and 7 - show Interests, 8 and 9 - Traits.

School A

GRADE II · 1929-1930

DRAWINGS FOR ANALYSIS OF MENTAL CONTENT

–Table 4–

NO.	DATE OF DRAWING					TIME FOR DRAWING					AV. T.
1	*S.24	M.25	—	—	—	*20	40	—	—	—	30.
2	O.14	J.16	J.31	F.12	M.17	9	15	15	11	23	14.6
3	O.14	J.29	F.12	F.26	A.15	20	20	19	17	16	18.4
4	O.16	—		—	—		—		—	—	—
5	O.15	D.5	F.12	F.26	M.19	10	?	25	17	30	20.5
6	O.17	F.12	M.16	A.2	A.30	?	3	10	20	16	12.2
7	O.6	J.8	F.5	F.19	A.28	20	21	8	7	16	14.4
8	—	—	—	A.24	A.26	—	—	—	?	?	—
9	O.7	D.11	J.27	M.26	A.15	30	47	37	40	18	34.5
10	J.14	F.10	F.19	F.25	A.15	7	20	10	?	9	11.5
11	O.11	N.6	D.11	D.18	F.19	10	16	22	7	18	14.6
12	O.4	J.7	F.28	M.19	A.29	10	5	?	10	8	6.
13	D.18	J.15	F.12	F.19	A.15	21	18	18	11	10	14.
14	F.5	F.12	F.26	M.19	—	25	21	23	42	—	27.7
15	O.17	J.8	J.27	F.11	F.26	15	15	11	20	13	14.8
16	O.15	D.18	J.9	F.13	M.19	20	13	15	15	20	16.6
17	O.10	J.10	F.5	F.12	F.26	17	8	10	12	15	10.4
18	O.15	J.3	J.27	M.19	A.15	15	25	27	13	17	19.4
19	O.9	J.10	J.29	F.26	M.17	15	26	14	12	24	18.2
20	O.4	D.5	J.16	F.5	F.17	15	15	17	10	7	11.8
21	O.9	J.15	J.31	F.19	F.26	7	15	26	25	27	20.
22	J.8	F.5	F.26	M.19	A.2	6	6	11	12	10	9
23		F.12	A.15	A.28	A.30		11	10	5	20	11.5
24	O.30	J.29	F.5	M.17	M.31	6	27	7	17	15	13.4
25	J.8	M.26	A.15	A.29	—	10	15	37	15	—	19.2

* Read – S.24 – September 24
M.25 – March 25, etc.

* Time is given in minutes – *20 min.
Av. T = Average time for drawing.

School B

GRADE I - 1929-1930

DRAWINGS FOR ANALYSIS OF MENTAL CONTENT

-Table 5-

No.	DATE OF DRAWING					TIME OF DRAWING					Av. T
1	O.21	N.20	J.6	F.2	A.28	15	15	15	13	12	14.
2	O.21	N.21	D.16	F.2	F.17	27	17	19	28	12	20.6
3	S.30	N.20	J.6	F.2	A.14	20	25	17	22	20	20.8
4	O.21	N.25	D.16	F.24	M.17	17	12	9	8	15	12.2
5	O.7	N.13	D.9	F.2	F.24	20	6	15	10	12	12.6
6	O.7	N.25	F.2	F.10	F.17	12	8	10	8	13	10.2
7	O.7	N.6	N.25	J.27	F.17	38	10	15	12	16	18.2
8	O.21	N.20	J.13	F.10	F.17	15	15	8	20	17	15.
9	N.6	D.2	J.27	F.10	F.17	16	20	10	5	7	11.6
10	N.13	J.27	F.10	F.24	M.17	10	10	16	17	15	13.6
11	S.30	D.9	J.13	F.2	F.17	25	10	10	15	14	14.8
12	N.6	N.25	D.9	F.2	F.17	7	6	20	6	7	9.2
13	O.28	N.25	J.13	F.2	F.17	15	7	3	6	6	7.4
14	N.6	D.2	D.9	F.10	F.17	12	14	10	13	5	10.8
15	O.7	D.2	J.13	F.2	F.17	17	18	12	10	7	12.8
16	O.7	N.25	J.27	F.24	M.17	13	10	10	20	12	13.
17	N.13	D.16	J.27	F.10	F.17	15	20	15	11	5	13.2
18	N.13	D.16	J.27	F.10	F.17	12	14	10	15	9	12.
19	O.28	N.25	D.2	J.27	F.10	15	28	10	10	11	14.8
20	N.6	D.2	D.9	J.6	F.17	4	10	12	8	6	8.
21	O.21	N.20	D.16	F.17	F.24	20	12	10	10	16	13.6
22	N.6	D.2	J.27	F.10	F.24	7	7	15	13	10	10.4
23	N.6	D.2	J.27	F.10	F.17	16	20	10	5	7	11.6
24	O.7	N.25	J.13	F.2	F.17	7	10	17	15	13	12.4
25	N.13	D.9	J.27	F.10	F.24	8	14	17	12	15	13.2

Read as previous table.— Table 4.

School A

FREE EXPRESSION DRAWINGS

SECOND YEAR - 1929 - 1930

-Table 6-

PUPILS	HOUSE	FURNITURE	TREE	FLOWER	SUN MOON	BIRD	BOAT	ANIMAL	CHILD	WOMAN	MAN	OTHER INTERESTS
GIRLS												
1	//			/								
2	///	//	////	//	/				///			zilophone, caterpillar, bee kinder. room. bookshelf
3	//			/	//				//		/	umbrella, rain, snow sled. hearts
4			/	/					/			
5	/						//		//	/	/	flag, sled, cart. doll
6	///		/	////	///							sign, nest, eggs
7	𝍸		𝍸 /	𝍸 /					////			
8	/		/	/			/	/	//			
9	///		//	/								pond 2. garden 2. steps Santa - reindeer - tent
10	/					//		//	///		/	cart, garage, snowman sled.
11	///	//	/	///					////		/	toy, tent, fairy
12	///	/	/	//		/		/	////		/	pond, Jack O, movie show
13	////	/	/	/	/ /				///			snow
14	///		//	///	//	/			////	/		waste basket, box, sled carriage.
15	𝍸	/	//	///	////				𝍸	/		sled 2. Jap. lantern, box
16	//		///	////		//			//		//	bird house. tent 2.
17	𝍸		𝍸	//		//			/			nest 2.
18	𝍸	////		𝍸	/	/			////			
19	/		///	////	𝍸	/	/		//		/	lake, auto, fence, rain, fruit
BOYS												
20	////		///	////								trolley. 3.
21	/		/		///			/	//		/	auto 2, Sambo, drum
22	///	/	//		//	//	/	///	///		/	door, snow, star, flag
23	//					/	/					bird's house
24	/				/		//				/	door, window, steamshovel
25	//	/						/			Indian	Copy of Baby Bunny
Total -	65	13	39	48	25-1	13	8	9	51	3	12.	

Reading explained on Page 11.

School A

FREE EXPRESSION DRAWINGS

GRADE II - 1929-1930

These lists form a summary of drawings shown on the preceding table. Those marked + had been either taught during a drawing lesson or found pictured in literature and used for illustration during the reading program. Thus 34 out of 49 subjects had their origin of interest and method outside of school or free from directed study.

The question is: What further use can we make of these discovered individual interests and graphic ability?

house
furniture
+ tree
+ flowers
sun-moon
bird
boat
animal
child
woman
+ man
umbrella
rain
snow
sled
+ cart
doll

flag
+ sign
nest-eggs
+ tent
+ fairy
+ pond
+ Jack-O
movie show
waste basket
+ box
carriage
Jap. lantern
auto
fence
+ fruit
zilophone
caterpillar

bee
room-interior
book shelf
garden
steps
+ reindeer
Santa
garage
+ snowman
birdhouse
door-interior
steam shovel
trolley
+ star
+ Indian
Bunny Baby

School B.

FREE EXPRESSION DRAWINGS
GRADE I - 1929-1930.

-Table 7-

PUPILS	HOUSE	FURNITURE	TREE	FLOWERS	SUN MOON	BIRD	BOAT	ANIMAL	CHILD	WOMAN	MAN	OTHER INTERESTS
GIRLS												
1	////	//	C.T	///	/				///		///	cart, box, car. banana 2., sidewalk
2	𝍸	//			/			𝍸	///	/	/	sidewalk 2. umbrella 4. rainbow, carriage, cart, flag
3	//		C.T	//	//				/			fireplace, letters, numbers
4	//	//		/			/	/	/	//		music, pig, monkey
5	///	/							//		/	tent 2. curbstone, store window, garden
6							//		/	//	//	Indian 2.
7	//			///	//							auto, balloon, tent, doll, Red Riding Hood
8	//	𝍸		𝍸					//		///	scooter, 2. cart, balloon, ball 2 blk bird, carriage 2. fruit
9	/		/	//	// ///		/		////			carriage - bumble bee shoes, ball, apple. flag
BOYS												
10	/		/		/ /		/	/			///	windmill, pooltable, ball bat; airplane, cart, fruit
11	////	/		/			House /					sleigh. Santa, reindeer airplane, stars, newmoon
12	////	/	//			turkey	//		/			garage, airdome, airplane balloon, tent, flag, Pilgrim
13	//		/			/	///				//	
14	light ////		/		// /	house	///					music cart, toolshift, auto derrick, electric train, stars chicken house boat, church
15	//				// /		////					auto. hook and ladder house boat
16	///	/	/			/	/		//		////	hut, balloons
17	////		//									Santa 4. scooter 4 sidewalk - window 3
18	//						/	/			/	box, football, auto 2. scooter 4.
19	//	//					ruins		pappoo		fireman	Robin Red-br. house. school house on fire, jitney, trolley fire engine, choo-choo church
20											///	football, fireengine. bed garage.
21	///		/				/		baby //	mother	father	cart 2. basket 2. kite. flag hat, baby's yard, pumpkin fruit
22	/	/				/			//		///	step ladder, pop corn cart tent, Jack'O, acorns, candle.
23	//						//		baby	mother	father //	
24	//						////		baby	mother	father	auto, hook and ladder
25	/											fruit 4. box 3. window 3 circle
Total	59	18	12	17	19	4	29	9	26	8	33	

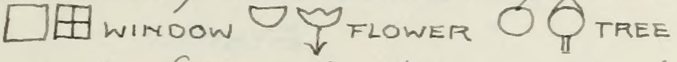
Reading explained on Page 11.

School B

FREE EXPRESSION DRAWINGS

GRADE I-1929-1930

These lists form a summary of drawings shown on preceding table . Those marked + were taught in some form during a formal dictation drawing lesson. They were usually evolved from geometric forms, as:



Thus 59 out of 71 subjects seem to be of interests and methods originating outside of school, or drawing lessons.

+ house
furniture
+ tree
+ flower
sun-moon
+ bird
+ boat
+ animal
child
woman
man
+ cart
box
car
+ fruit
sidewalk
+ umbrella
rainbow
carriage
flag
fireplace
pig
monkey

+ tent
store
Indian
doll
Red-R-Hood
scooter
blackboard
bat-ball
bumble bee
shoes
windmill
pool table
airplane
sleigh
Santa
reindeer
stars
new moon
air dome
pilgrim
tool shift
derrick
electric train

chicken-boat-house
Robin-Red B. house
church
hook and ladder
house boat
hut
balloons
house on fire
jitney
trolley
fire engine
+ bed
garage
basket
+ kite
babys yard
baby
mother
father
step ladder
pop-corn cart
Jack O'
acorns
+ candle-circle

ANALYSIS OF DRAWINGS

Surely by more careful study of a child's drawings much can be learned of their emotional and mental condition and development, principally in fields such as the following:

1. interests
2. observation
3. digression (concentration)
4. reasoning
5. imagination
6. sequence of ideas
7. self-criticism
8. difficulties
9. egotism
10. sociability
11. talent
12. motor control

Uniform scoring is difficult for lack of objectiveness. They would be good points to submit to a committee for a consensus of opinion. The list at the first contained patience and truthfulness, but these were later omitted as much in evidence or covered by other listed traits.

If free expression drawings not made during observation were analyzed as these of "mental content" have been, it seems that the traits 3, 4, 6, 7, 9, and 10 would be wholly obscure, and the majority of 8. Sometimes thru conversation traits 2, 5, and 12.- yes, even 11, are more revealed. We have much to learn.

School A

ANALYSIS OF MENTAL CONTENT AND DRAWINGS

-Table 8-

PUPILS	Observation	Imagination	Reasoning	Sequence	Memory	Digression	Difficulties	Self-Criticism	Egotism	Sociability	Talent	Motor Control
GIRLS												
1	/	/	—	/	//	///	/	𝍸	///	//	—	/
2	𝍸 𝍸 //	///	𝍸 𝍸 /	𝍸	//	////	—	///	///	////	—	/
3	𝍸 𝍸	///	𝍸 //	/	—	//	—	𝍸 //	𝍸 ///	////	—	—
4	—	—	—	—	//	/	—	—	—	/	—	/
5	////	//	////	//	//	/	/	////	/	/	///	/
6	////	—	—	/	//	//	—	—	/	///	—	/
7	///	𝍸 /	//	///	//	//	—	///	—	//	—	///
8	/	//	—	/	/	—	—	/	—	/	—	/
9	𝍸 𝍸 ///	////	𝍸 𝍸 ///	////	///	𝍸 𝍸	—	𝍸 ///	///	𝍸 /	///	///
10	////	////	/	//	—	—	—	//	/	/	/	/
11	𝍸 ///	𝍸 ///	////	///	/	/	—	//	////	///	/	///
12	///	𝍸 //	///	/	///	𝍸 //	—	𝍸 //	//	//	/	—
13	///	/	/	///	///	—	—	/	—	—	—	—
14	𝍸 //	—	////	///	///	𝍸 /	/	//	//	𝍸 //	//	/
15	//	//	—	—	—	//	—	/	/	/	—	///
16	𝍸 𝍸 ///	////	///	///	/	𝍸 /	—	//	/	𝍸	—	///
17	///	/	/	///	///	—	—	/	—	—	///	𝍸
18	—	/	—	—	—	—	—	—	—	/	—	—
19	𝍸 𝍸 /	𝍸 ///	//	/	—	//	—	////	—	//	—	////
BOYS												
20	𝍸 𝍸 /	//	////	𝍸	—	𝍸 ///	—	𝍸 /	////	///	—	—
21	𝍸 ///	////	////	//	//	//	—	𝍸 //	—	//	////	////
22	𝍸 ////	////	//	//	/	/	/	/	—	/	—	/
23	/		/	/			/			/		
24	///	𝍸 /	////		////	𝍸	/	𝍸 ////	𝍸 ///	/	/	
25	///	/	/	—	//	///	𝍸	////	—	///	—	/

Reading explained on Page 11.

School B

ANALYSIS OF MENTAL CONTENT AND DRAWINGS

-Table 9-

PUPILS	Observation	Imagination	Reasoning	Sequence	Memory	Digression	Difficulties	Self Criticism	Egotism	Sociability	Talent	Motor Control
GIRLS												
1	//	/	/	—	/	//	////	//	/	///	—	/
2	///	𝍸	—	/	////	//	/	///	—	///	—	/
3	𝍸	𝍸	//	//	—	𝍸	/	𝍸	𝍸	///	/	///
4	/	/	—	—	—	—	/	—	—	—	—	—
5	/ o	///	—	o —	—	/	— o	—	—	/	—	—
6	—	//	—	—	—	—	//	/	/	/	—	—
7	𝍸 /	////	///	/	////	////	////	///	///	///	—	/
8	𝍸 //	𝍸	////	/	—	𝍸 //	—	𝍸	𝍸	//	—	//
9	///	////	/	/	/	///	//	/	//	//	—	—
BOYS												
10	////	////	/	—	/	—	—	/	//	—	—	/
11	𝍸 //	////	𝍸 𝍸	/	//	/	/	////	𝍸 //	///	//	/
12	///	𝍸	/	—	/	//	—	///	//	/	—	//
13	/	/	/	/	///	/	/	////	//	/	—	/
14	////	////	//	//	/	/	—	////	—	///	—	—
15	////	/	//	///	//	//	—	/	—	/	///	///
16	𝍸 //	𝍸 //	𝍸	//	//	𝍸	///	/	//	////	—	—
17	///	//	—	—	—	///	—	/	—	//	—	—
18	///	//	—	—	/	///	/	—	/	///	—	—
19	///	///	//	//	//	////	/	////	𝍸	𝍸	—	/
20	/	//	//	—	—	𝍸 ///	/	///	//	////	—	—
21	////	𝍸 ///	𝍸 ///	//	////	/	—	𝍸 ///		//	—	//
22	𝍸	/	////	—	𝍸	—	/	////	/	—	—	—
23	////	/	/	/	/	//	—	////	—	//	—	/
24	𝍸 /	///	𝍸 /	//	//	—	—	//	/	//	/	/
25	/	—	/	—	/	—	/	—	—	—	—	/

Read as Table 8.

OBSERVATION

Most of the observation which has been credited in this analysis is that which was revealed through conversation accompanying the drawing of the pictures, since the value of knowing "mental content" is the point about which we are most concerned. This trait is reflected in about all points scored except that of pure imagination, which trait is rarely found. If the finished drawing showed marked accuracy in some respect, a point was scored even if not noted during conversation.

Examples from recorded conversations:

1. "Takes quite a while when you're careful."
2. "I can make green without that crayon. See! Yellow and blue. I'm wise at it, ain't I."
3. "Huh! funny face. That one's kind 'a circlous."
4. "I can put the sky right over his blouse (blue) and it doesn't show."
5. "It looks as if a fog was there."
6. "You can hardly tell the sky from the water."
7. "Gee! the tiger got a lump on his head. Looks like a dog."
8. Yellow's so much like white I'm going to use it."
9. I saw a caterpillar climbing on a tree yesterday.

IMAGINATION

This quality may vary from capricious fantasy to familiar events or objects put into composition.- The samples given show the extremes with intervening steps of variation. Any signs of this trait should be carefully studied,-for the condition of the emotional life of the child is revealed most of all through this channel.

1. "I have to add something to the boat. Smoke. Look out it don't choke you."
2. "He's going to catch de rabbit."
3. "It looks just like he got a bow on."
4. "See the propellor going?"
5. "O, what a noise when it starts. She almost crashed on us."
6. "There's a ladder in the moon tonight."
7. "God only made two stars tonight.

REASONING

Reasoning might be called an advanced form of observation. Naturally the reasoning at these ages is found varying from the simplest to quite complex. The least amount of reasoning by little children is worthy of note. They delight in giving reasons, no matter how flimsy they be. Reasoning governs much of the success of picture-making. It shows in good sequence, good picture composition, and in fitness of size shape and color.

1. "I always put the door in first so I can put the windows right beside it."
2. "Going to color the smoke red cause its fire."
3. "It'll be like this cause it's night time."
4. "George Washington's birthday is all gone, so the flag is going to be down."
5. "I'd better put green windows so the shades will be down. Green shades, - cause the people are sleeping."
6. "If I color the sky down there it will be all right, for it will be far away down there."
7. "Know what I'm going to do? Leave a space for the windows cause theyre all melted by the fire."

SEQUENCE

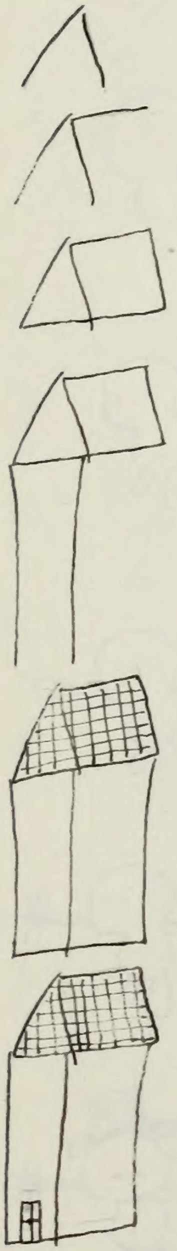
When there appears to be method in either the drawing of a single object or the grouping of objects, to form a picture story, credit was given for sequence. What we really consider is sequence of thought. Many grade one children are found to have quite a schema developed for the making of a single object, even when they have not gotten to the stage of grouping them to tell a picture story. When a child forgets or overlooks a necessary part of an object, sometimes going back, however, to add it after starting something else, sequence of thought has been considered minus for that object or picture. The observation of the drawing process reveals presence or absence of sequence more than the finished drawing-or conversation; for in the first the process may appear sequential, yet not in reality, and in the latter, or conversation, the child does not mention it except in some cases of pride in knowing how.

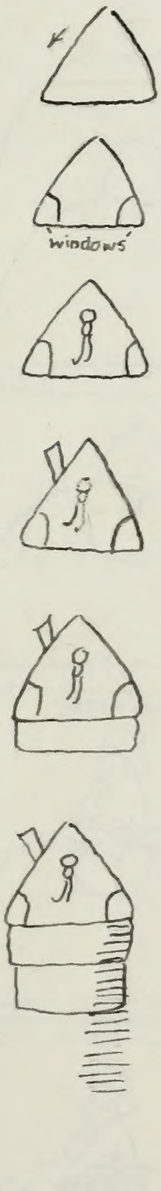
Page 25-called "Schema" shows some of the interesting ways in which children showed their ideas of sequence in the drawing of separate objects.

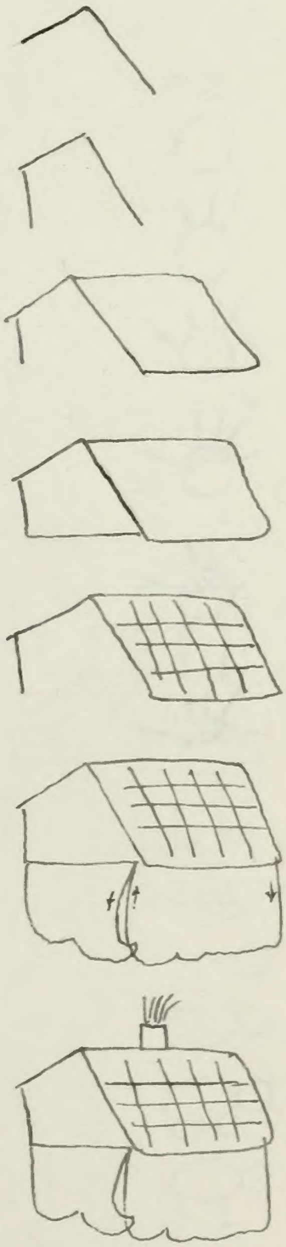
SCHEMA

Illustrations for preceding page - called "Sequence".

— HOUSES —



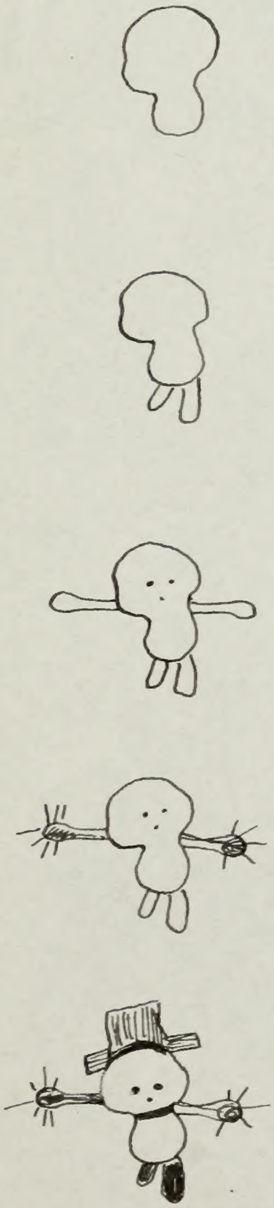


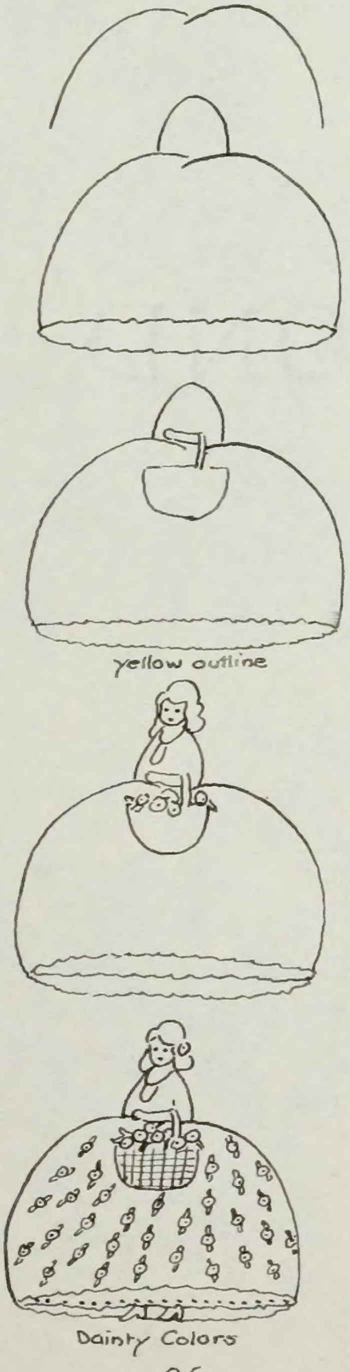


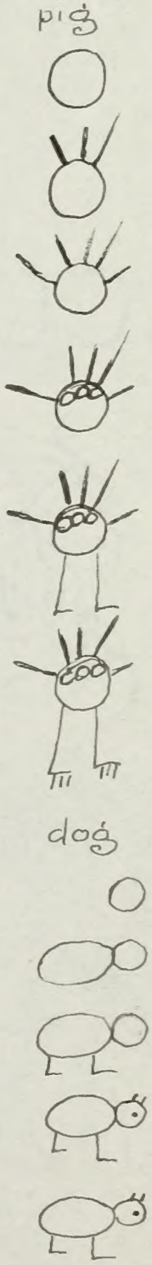
SCHEMA

Illustrating page called "Sequence"-P.24

MAN- -LADY- -ANIMALS




yellow outline
Dainty Colors



MEMORY

Memory plays such an important part in the success of the childs efforts, that we should be very alert to notice and give praise for its presence. Interest, observation, reasoning, difficulties, sequence, — these all are related to memory. Several times during this study it was noted that the memory span was over several months duration. The observers memory was sometimes renewed.

1. "Miss Tucker doesn't want us to put the sun in, but thats what they do." (From previous year.)
2. "I dont forget the ruins at Nantasket." (The boy was drawing them a month after.)
3. "I like they way you leave clouds. Did anyone show you how?"
   "You did."
4. "A little red jacket, blue trousers, purple shoes, with little pink soles, and an umbrella - a green one. He didn't have a hat, did he."

CHIEF O BOND

DIGRESSION

When the conversation was remote from the subject in hand we called it digression, Just how detrimental it may be, is difficult to decide. It may be a valuable source of information in that it acquaints us with more of the childs' interests, and experiences which may be of service. The work usually proceeded and seemingly without any disaster. It is a time when the child is more apt to think of things to say which are of especial interest or of things or questions which keep recurring. If they seem valueless. or nearly so, so much the better chance to help evaluate.

Samples of digression:-

1. "Jack be nimble, etc." repeated three times.
2. "My sister goes to St. Marys School. She is in the fifth grade."
3. "Do you know what he did? Took a sling shot and put it in a man's eye. I took mine and put it in his eye. The man said, "Thank you"."

5. "Holy Moses, King of the Jews
Bought his wife a pair of shoes.
When the shoes began to wear,
Holy Moses began to swear"

DIFFICULTIES

A felt or unfelt lack of knowledge, or of technique in order to make satisfactorily a certain object or part of an object was scored a difficulty. Unfelt lacks were scored sparingly. If an error was corrected, or an attempt made to do so, the score was credited to Self-criticism. If no method was known for correction it came under difficulties. It was noted that choice of drawing was often made to avoid difficulties.

1. "Thats sposed to be a kite. I can't make one very well."
2. "I don't know very well how to make a boy."
3. "I can't draw people very good."
4. "I can't tell purple from blue."
5. "Do you like to draw houses best of all?" "No, I draw them 'cause they're easiest to draw, I guess."
6. Made a football and was not satisfied so started to trace a circle. Gave that up.

SELFCRITICISM

This differs from "Difficulties" in that here are scored attempts to better or correct unsuccessful attempts. They are difficulties which are often commendably corrected. Even though improvement is not as much as hoped for by pupil or observer, more is gained by non-interference from outside.

Samples of Self-criticism:

1. "I made the mouf round - too round."
2 "If you go outside the line it doesn't look good."
3. "When I make arms they're funny. because I'm a funny drawer."
4. "Gee! that ought to be blue."
5. See how little I made that part of her, and the legs are so long."
6. "Arr! (Rubbed with finger when he got a line too wide.) "Now its all right"
7. "Made the windows in the wrong place. I can't get over it."
8. Rubbed the eyebrow where it went outside the head.

EGOTISM

Perhaps this word does not suit all the varying degrees of pride which we find the little artists show that they feel in their ability. Satisfaction, pride, assurance, or self-favor are all put under this heading as will be observed by the following excerpts.

1. "I color light. None of the others do."
2. "I can make nice circles. I'll make the ears. I can make good ears."
3. I can draw a nice picture. My mother says she likes my pictures."
4. Observer hurriedly wrote his name on the paper. "You don't know how to make a good M, do you," he said.

SOCIABILITY

According to the old school this would be a detrimental method for getting mental content. The present observer has not found it so. There were very frequent spans of silence, though the records rarely show them as at first intended. Timing interfered much with listening and writing.

Any sign of taking an interest in others, as, putting a person in the picture with some comment of interest was scored for sociability. Other friendly conversation, even if included in digression, scored a point for each picture. It is usually true that lack of conversation shows lack of ideas, though reticence was also found to accompany good work. An imaginative mind rarely missed the opportunity to communicate.

1. "I'm doing it just as if I was doing sewing. Do you sew?"
2. "I have plenty of toys, and were poor, we are."
3. "I wish you'd ask me ten times. I wish you'd ask me a hundred times. I wish you'd ask me every time."

TALENT

When scoring for talent any sign of aesthetic appreciation, was scored;- that is, when the idea of the child and the result reasonably coincided. We are apt to judge too severely. Talent may be found ranging from a swift, crude jotting down of a series of imaginative or real ideas to a most careful rendering in every detail. Many of the first, imaginative, type would not find their place in an exhibition. They would no doubt be puzzling if not accompanied by an explanation. Watching and listening during the process gives much more appreciation and understanding of the embryo stages of talent.

1. "See the pretty flowers. Look at the pretty house."
2. "I always put the sun in. It's so pretty."
3. "Nice color - violet."
4. "That is the back door?"
   "Yes; 'cause the front door is prettier."

MOTOR CONTROL

Control of the medium,- in this case pencil or crayon,- seems to have little to do with the elusive quality called talent. Control as usually defined contributes to a neat, easily deciphered piece of work. This kind of drawing may be quite devoid of imagination. It may be even, one of an oft repeated and very limited vocabulary, which the child draws because of the feeling of ease. However, accuracy of hand sometimes follows accuracy and ease of thinking. Lack of motor contral shows a certain physical and emotional state that is quite individual in origin. The emotion state of an imaginative child may be so overwhelming that motor control is little thought of in the eagerness to depict ideas.

Lack of motor control was found in the case of (1) a little girl who had rickets
(2) a boy emotionally unstable
(3) a boy of low mentality.
(4) a girl who was bright but careless.
(5) an extremely imaginative boy.

INTELLIGENCE TESTS

What were used
Why used

Goodenough Test
Detroit
Rhode Island
Pressey Primary Classification
Pintner Cunningham
Stanford Revision of Binet-Simon

Results

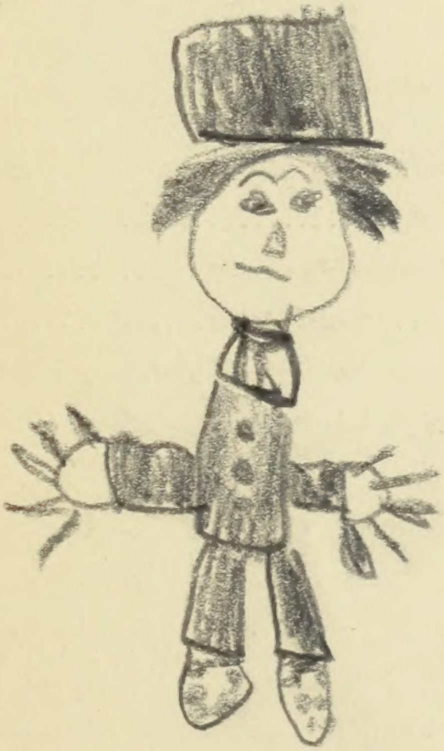
INTELLIGENCE TESTS

In School A. the first test was given by the classroom teacher in October. This was the first grade Detroit Intelligence Test. The Goodenough Intelligence Test and the Rhode Island Test were given by the observer, and correlated with the Detroit results. In May the classroom teacher gave the Pintner-Cunningham Mental Test. All the tests were free from the reading handicap.

The Goodenough Intelligence Test consists of the drawing of a man. It is the only drawing test with a claim of equality with other reliable tests in the measurement of general intelligence. Accompanying sample sheets show drawing and method of scoring.

The Stanford Revision of the Binet-Simon individual test was given in some cases when the correlation of other tests varied more than ten points. It was also given to determine if possible the value of the Goodenough as an intelligence rather than a special ability test.

In School B the Pressey Classification Test was substituted for the Detroit Test, but with very unsatisfactory results. The test was given by the classroom teacher. The observer was present and thought it well given. The Rhode Island Test was not satisfactory as in School A. But for an epidemic of measles, the Detroit Test would have been tried. Several reasons may be found for the unexpected and inconsistent results.



Class A

Total score 24

Class B

Total score

1 ✓
2 ✓
3 ✓

4 *a* ✓
4 *b* ✓
4 *c*

5 *a* ✓
5 *b*

6 *a* ✓
6 *b*

7 *a* ✓
7 *b* ✓
7 *c* ✓
7 *d*
7 *e*

8 *a* ✓
8 *b* ✓

9 *a* ✓
9 *b* ✓
9 *c* ✓
9 *d* ✓
9 *e* ✓

10 *a* ✓
10 *b* ✓
10 *c*
10 *d*
10 *e* ✓

11 *a*
11 *b*

12 *a*
12 *b*
12 *c*
12 *d*
12 *e*

13

14 *a* ✓
14 *b*
14 *c*
14 *d*
14 *e*
14 *f*

15 *a*
15 *b*

16 *a* ✓
16 *b* ✓
16 *c* ✓
16 *d*

17 *a*
17 *b*

18 *a*
18 *b*

]

GOODENOUGH INTELLIGENCE TEST

For Kindergartens and Primary Grades

By Florence L. Goodenough, Ph.D.
Research Assistant Professor, Institute of Child Welfare
University of Minnesota

CHILDREN'S DRAWING SHEET

Name ....West ... Barbara.................................... Sex.......

Age..........years,..........months. Grade............Date..................

School...City...............................

Score	
M.A.	
IQ	

Supplementary Data

Date of child's birth....................... Birthplace...

Nationality of father..........................Nationality of mother.........................

Language spoken at home............................ Social status................................

Teacher's estimate of intelligence: very superior, superior, average, inferior, very inferior. (*Underline.*)

Quality of school work: very superior, superior, average, inferior, very inferior. (*Underline.*)

Health: excellent, good, fair, poor. (*Underline.*)

Attendance: very regular, fairly regular, somewhat irregular, very irregular. (*Underline.*)

Additional notes: ....

....

....

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GOODENOUGH INTELLIGENCE TEST

KEY[1]

1. Head present.
2. Legs present.
3. Arms present.

4 *a*. Trunk present.
4 *b*. Trunk proportion.
4 *c*. Shoulders present.

5 *a*. Attachment of limbs. (A)
5 *b*. Attachment of limbs. (B)

6 *a*. Neck present.
6 *b*. Neck outline.

7 *a*. Eyes present.
7 *b*. Nose present.
7 *c*. Mouth present.
7 *d*. Features in two dimensions.
7 *e*. Nostrils shown.

8 *a*. Hair present.
8 *b*. Hair detail.

9 *a*. Clothing present.
9 *b*. Two articles non-transparent.
9 *c*. Entirely non-transparent.
9 *d*. Four articles shown.
9 *e*. Complete costume.

10 *a*. Fingers present.
10 *b*. Number correct.
10 *c*. Detail correct.
10 *d*. Thumb shown.
10 *e*. Hand shown.

11 *a*. Arm joints.
11 *b*. Leg joints.

12 *a*. Proportion. Head.
12 *b*. Proportion. Arms.
12 *c*. Proportion. Legs.
12 *d*. Proportion. Feet.
12 *e*. Two dimensions.

13. Heel.

14 *a*. Coördination. Lines A.
14 *b*. Coördination. Lines B.
14 *c*. Coördination. Head.
14 *d*. Coördination. Trunk.
14 *e*. Coördination. Arms and Legs.
14 *f*. Coördination. Features.

15 *a*. Ear present.
15 *b*. Ear detail.

16 *a*. Eye detail. Brow.
16 *b*. Eye detail. Pupil.
16 *c*. Eye detail. Shape.
16 *d*. Eye detail. Glance.

17 *a*. Chin and forehead shown.
17 *b*. Chin and forehead; detail.

18 *a*. Profile A.
18 *b*. Profile B.

---

[1] See over for Table of Mental Age Equivalents of Scores. This Key is, of course, merely an outline and can be used only by a scorer who is thoroughly familiar with the methods of scoring each item as described in the author's book, *Measurement of Intelligence by Drawings*, pages 112–153 (published by World Book Company).

TABLE OF MENTAL AGE EQUIVALENTS OF SCORES[1]

Score	M. A.	Score	M. A.	Score	M. A.
1	3–3	18	7–6	35	11–9
2	3–6	19	7–9	36	12–0
3	3–9	20	8–0	37	12–3
4	4–0	21	8–3	38	12–6
5	4–3	22	8–6	39	12–9
6	4–6	23	8–9	40	13–0
7	4–9	24	9–0	41	Above 13
8	5–0	25	9–3	42	Above 13
9	5–3	26	9–6	43	Above 13
10	5–6	27	9–9	44	Above 13
11	5–9	28	10–0	45	Above 13
12	6–0	29	10–3	46	Above 13
13	6–3	30	10–6	47	Above 13
14	6–6	31	10–9	48	Above 13
15	6–9	32	11–0	49	Above 13
16	7–0	33	11–3	50	Above 13
17	7–3	34	11–6	51	Above 13

---

[1] It has not seemed wise to attempt to derive mental age equivalents above age 13. In finding the IQ's of retarded children who are more than thirteen years old, the chronological age should be treated as thirteen only, and the IQ recorded as "*or below.*" In the case of children who earn scores above 40, the mental age should be recorded as "13 *or above*" and the IQ as "*or above.*"

DETROIT FIRST-GRADE INTELLIGENCE TEST

By Anna M. Engel

Psychological Clinic Examiner, Detroit Public Schools

EXAMINATION: FORM A

School ____________________ Date of test ________________ Score __________

Last name ________________ First name ________________ Initial ______

Place of birth ______________ Color ______

Date of birth	Mo.	Day	Year	Sex
				M ☐ F ☐

Terms in Kindergarten ________________ Terms in B1 ________________

Country of Birth
Child
Father
Mother
Home language

TEST RECORD

No. of Test	Name of Test	Score
1	Information	
2	Similarities	
3	Memory	
4	Absurdities	
5	Comparisons	
6	Relationships	
7	Symmetries	
8	Designs	
9	Counting	
10	Directions	
	Total	

Rating ______________

Group ______________

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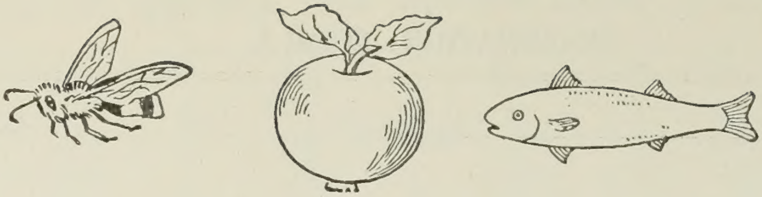

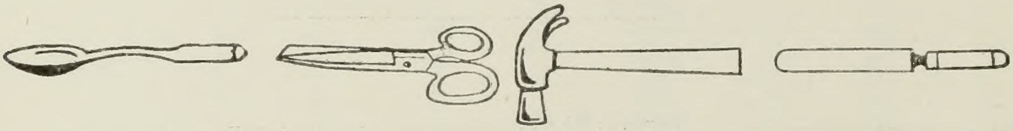

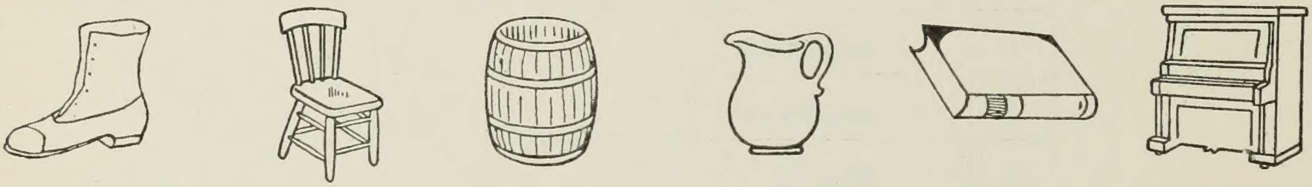

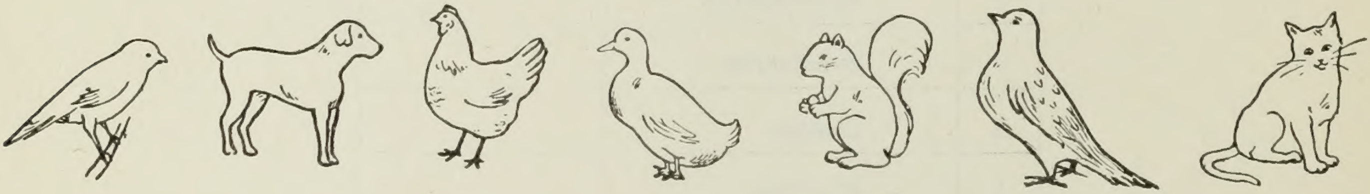

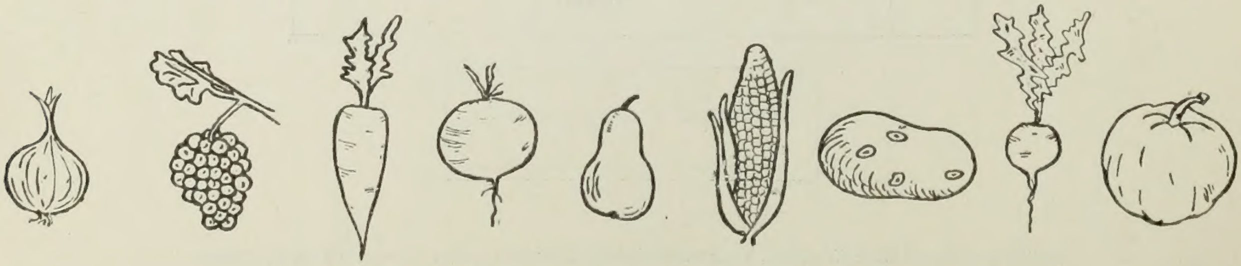

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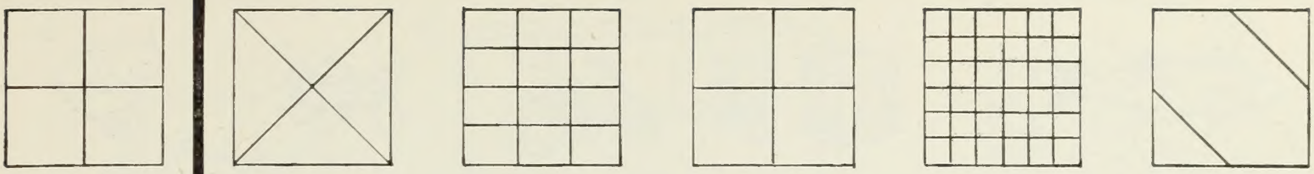

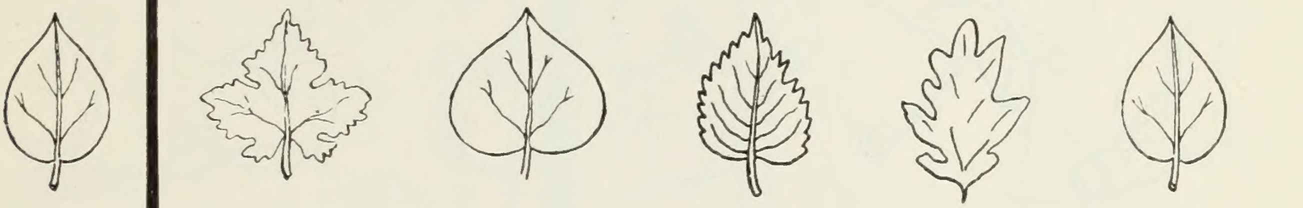

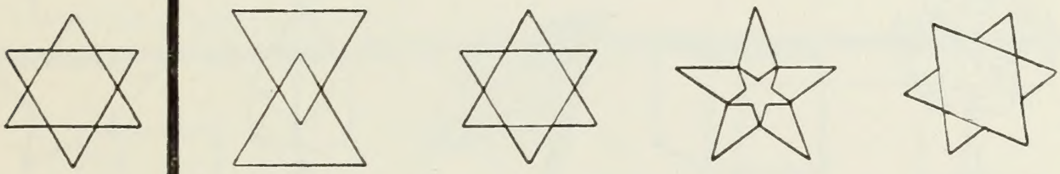

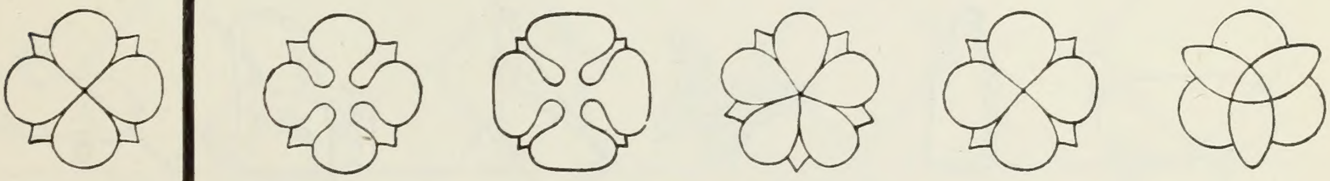

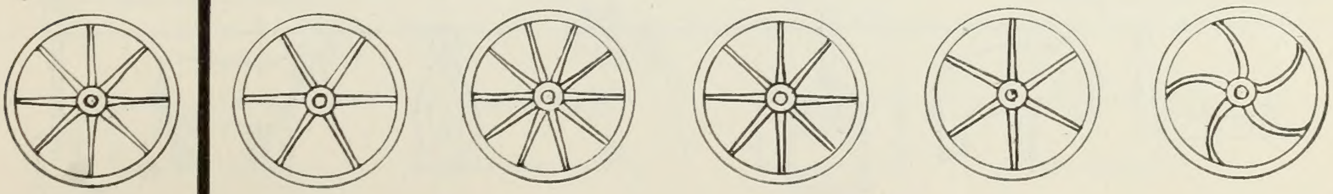

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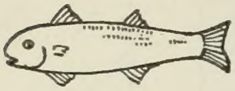
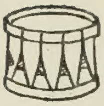
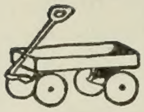
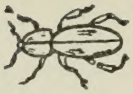
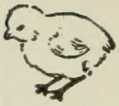

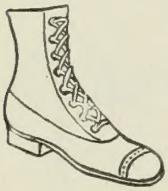
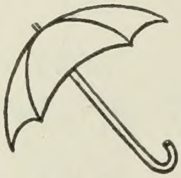
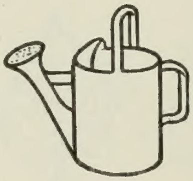
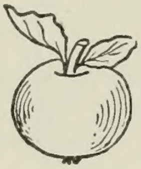
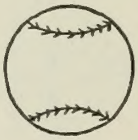
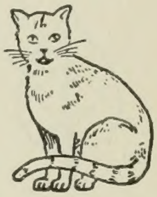

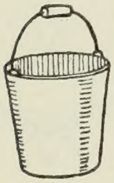
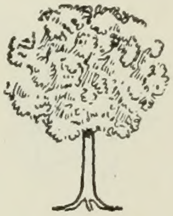
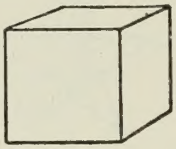
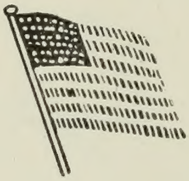
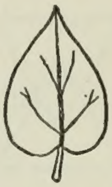
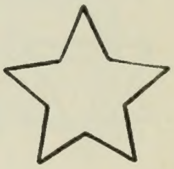

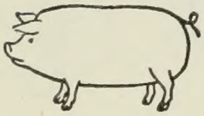
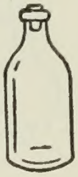
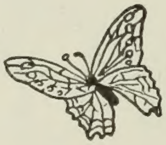
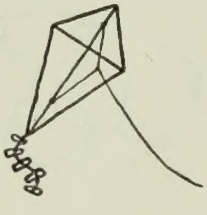
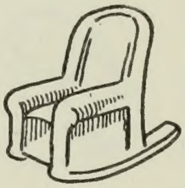
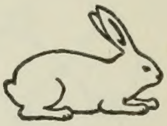

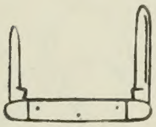
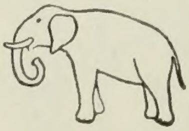
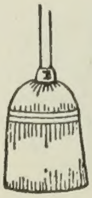
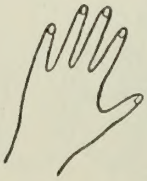
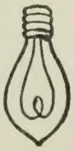
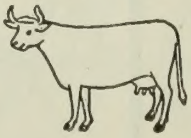
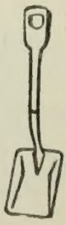

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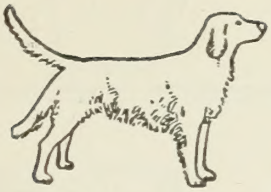

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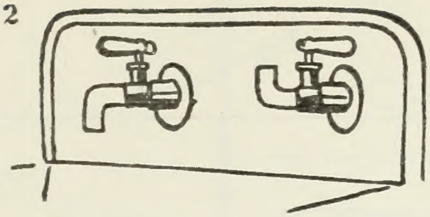

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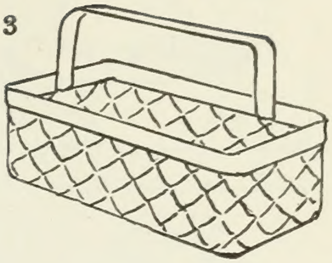

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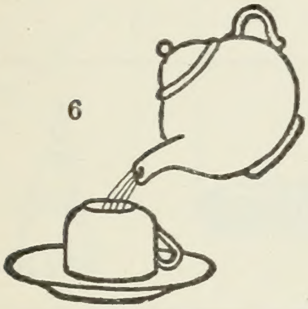

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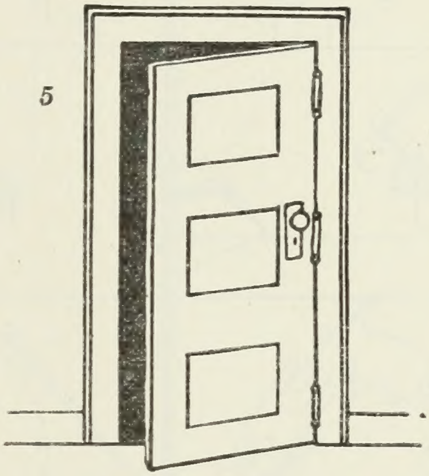

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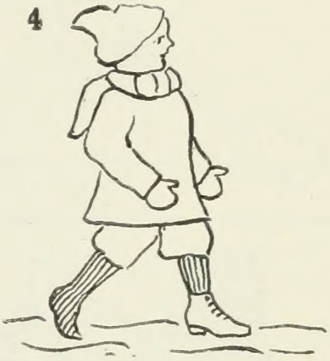

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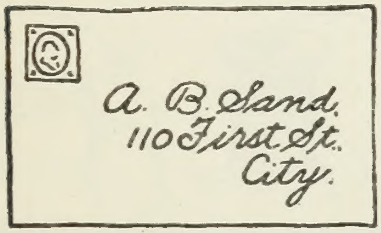
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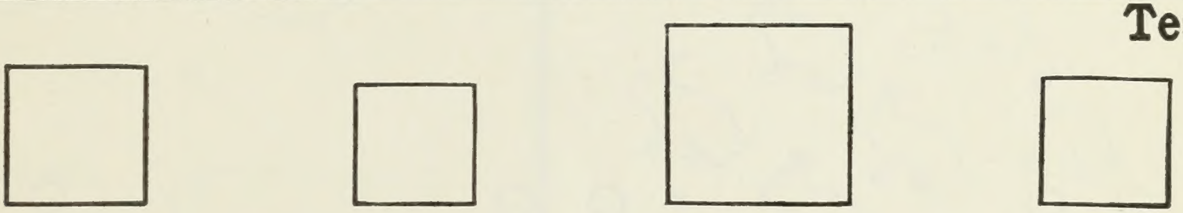

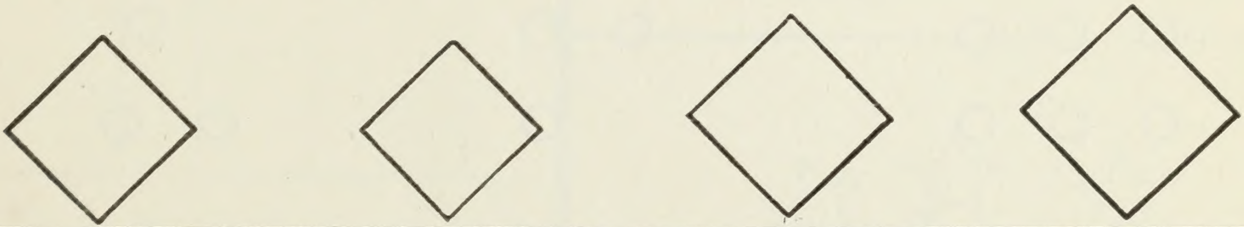

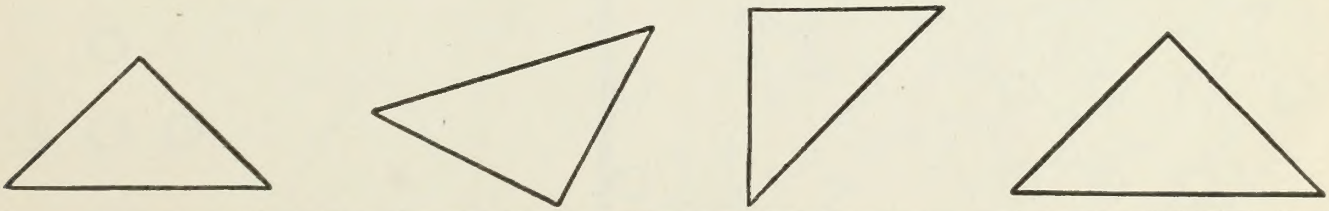

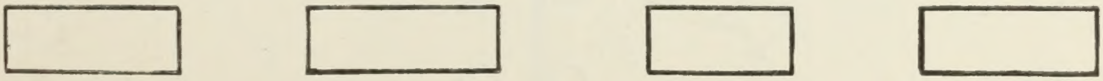

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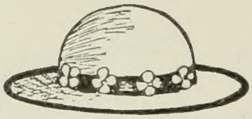
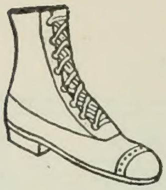
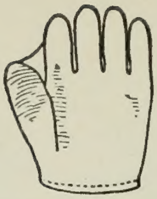

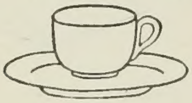
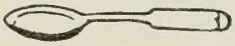
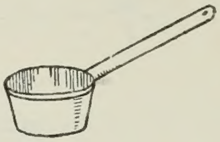
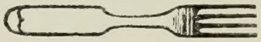

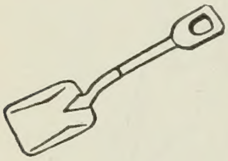
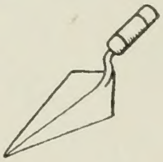
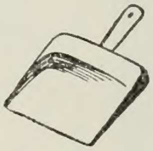
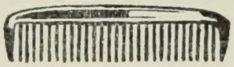
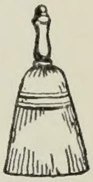

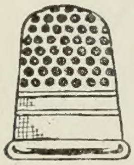
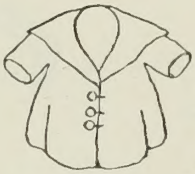
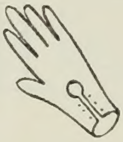
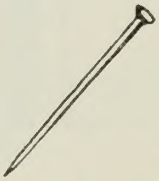
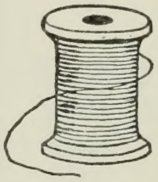
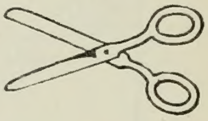

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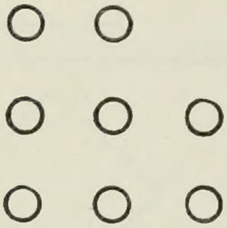

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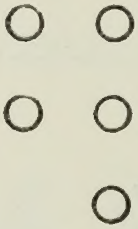

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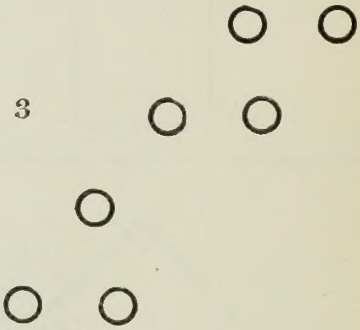

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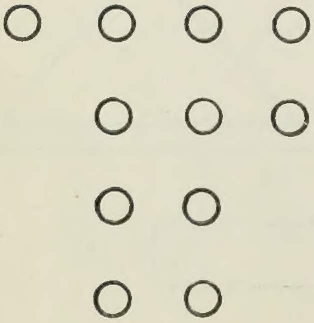

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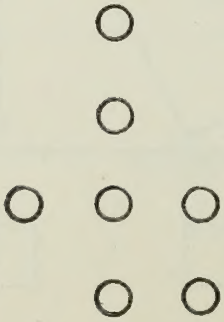

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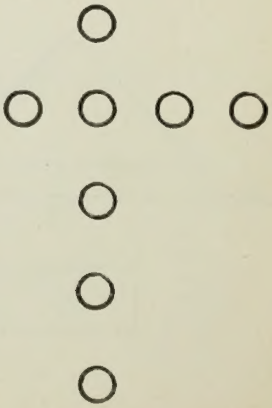

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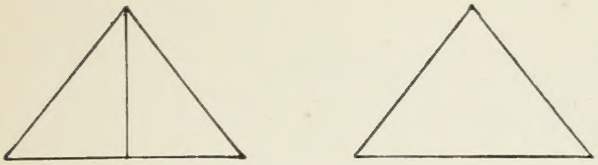

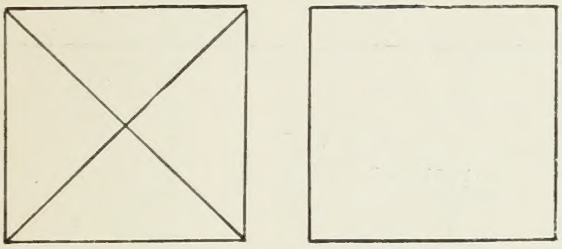

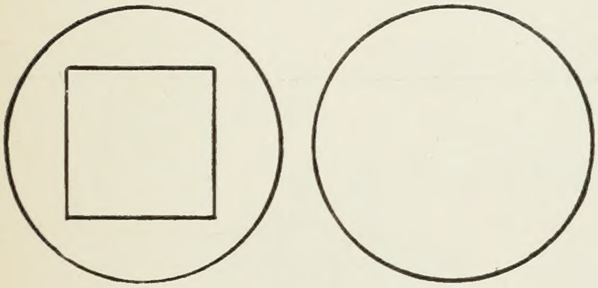

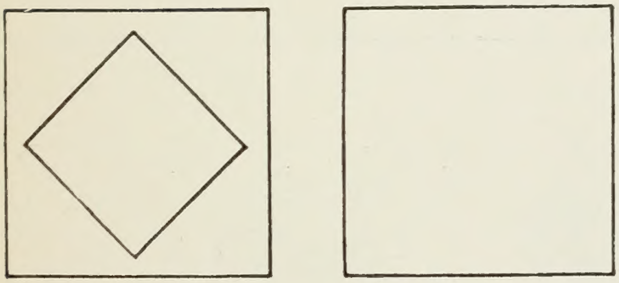

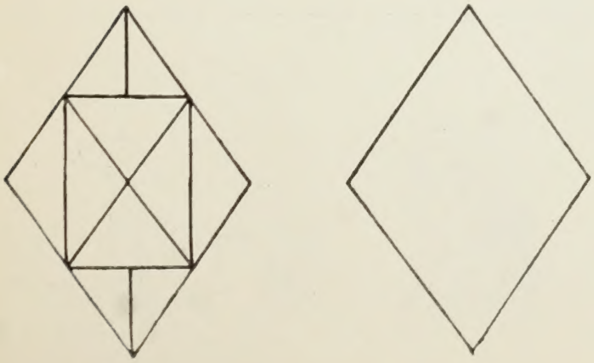

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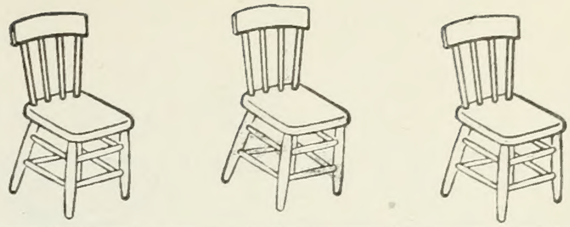

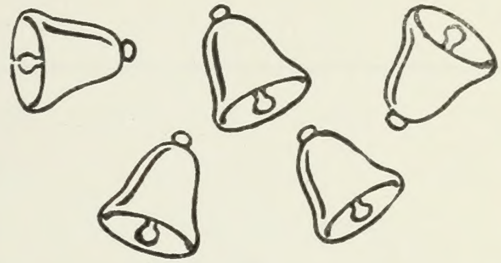

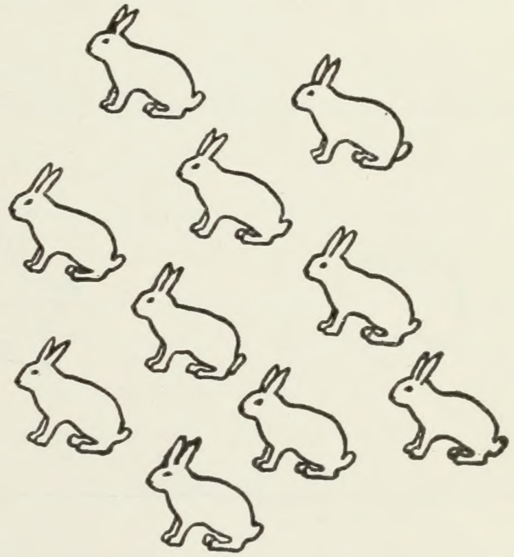

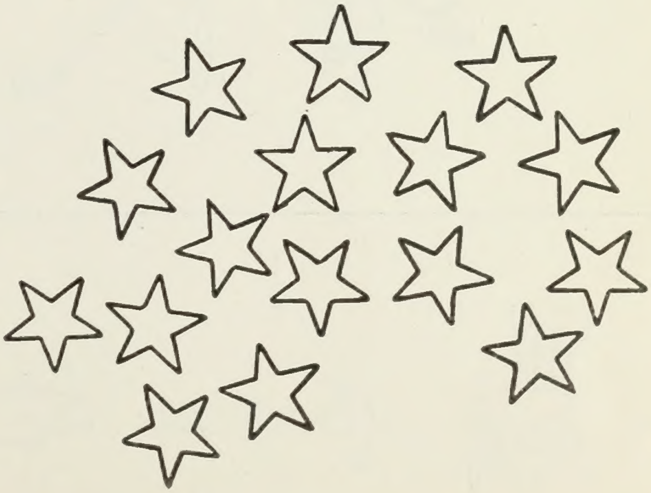

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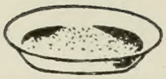
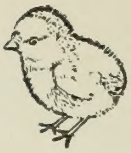
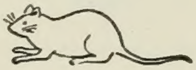
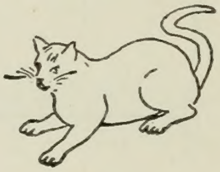
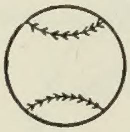
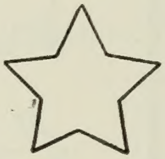
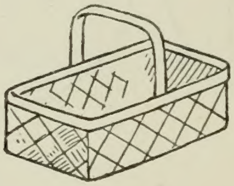
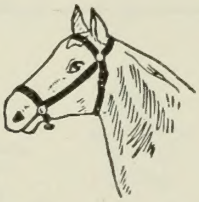
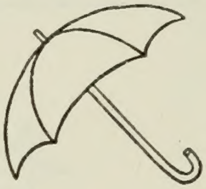
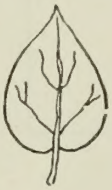
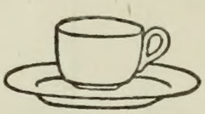
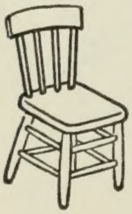
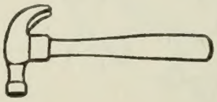
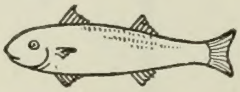
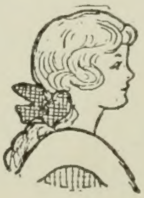
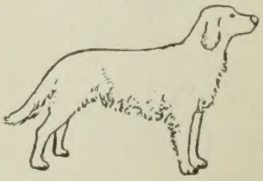



Rhode Island Intelligence Test
Form A

Published by the
PUBLIC SCHOOL PUBLISHING CO.
BLOOMINGTON, ILLINOIS

Total Score 25
6y - 11m

RHODE ISLAND INTELLIGENCE TEST

FOR CHILDREN FROM THREE TO SIX YEARS OF AGE

Devised by
G. E. BIRD and C. E. CRAIG
Form A

City .... County ....
State .... Date ....
Last Name T First Name George Initial ....
Sex .... Age, Yrs. .... Mos. .... Home Language ....
School Superintendent .... Teacher ....

TEST RECORD

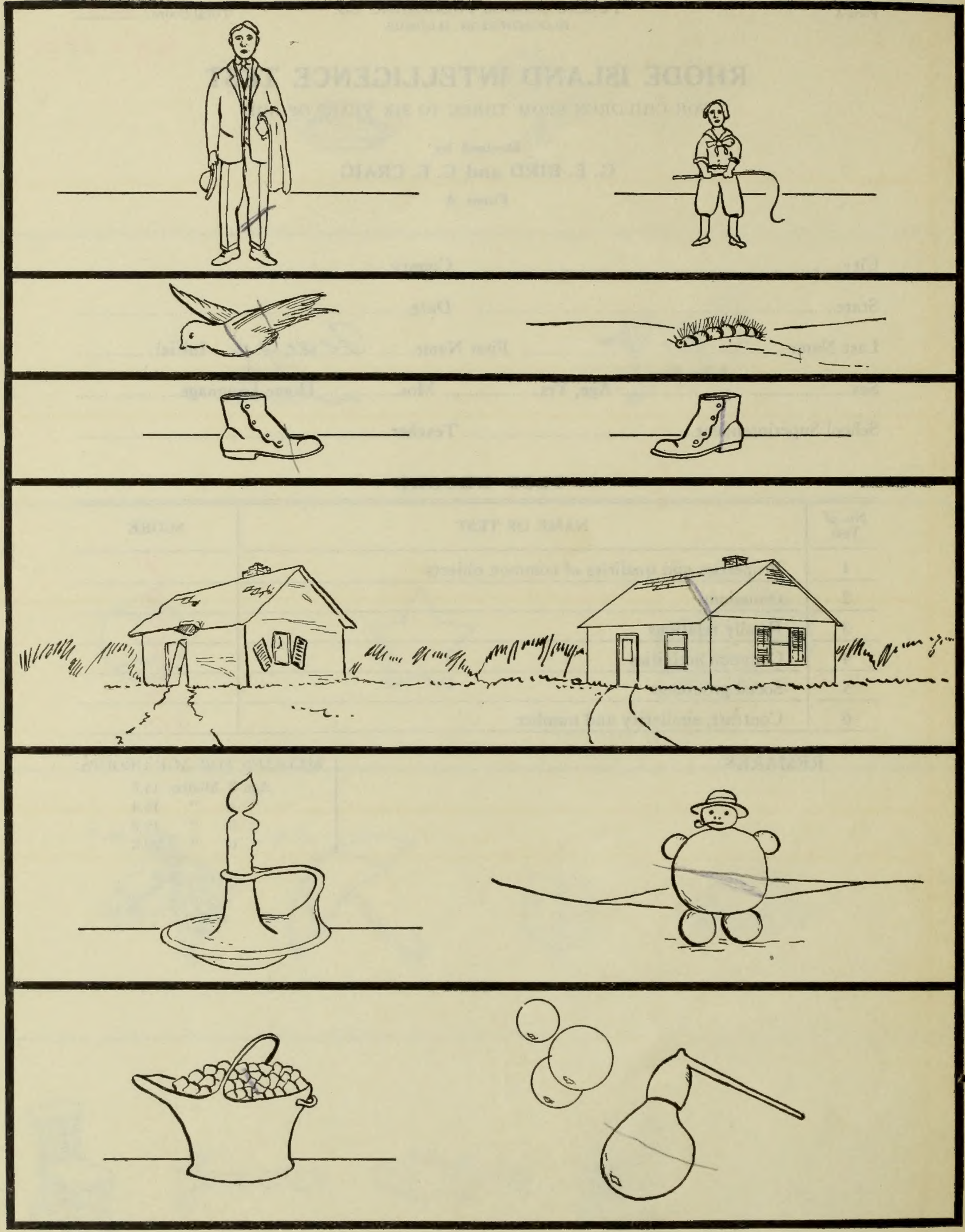
No. of Test	NAME OF TEST	SCORE
1	Properties and qualities of common objects	7
2	Omissions	2
3	Family relations	2
4	Common activities	2
5	Social groupings	2
6	Contrast, similarity and number	10

REMARKS:

MEDIANS FOR AGE GROUPS:
Age 3 Median 14.5
" 4 " 16.4
" 5 " 19.3
5-6 " 6 " 22.3 20.3

377-4p

Test I



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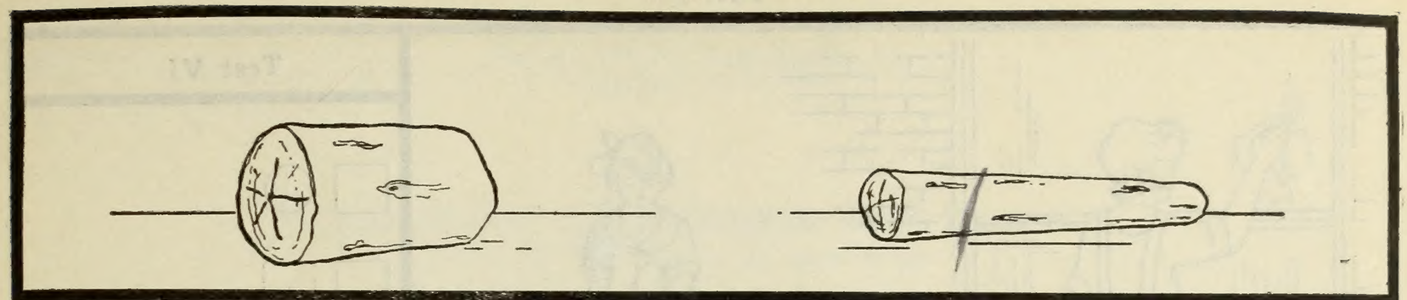

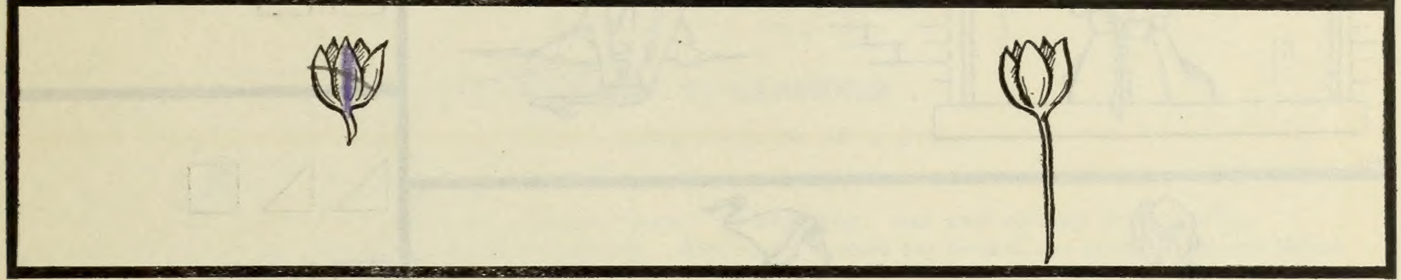

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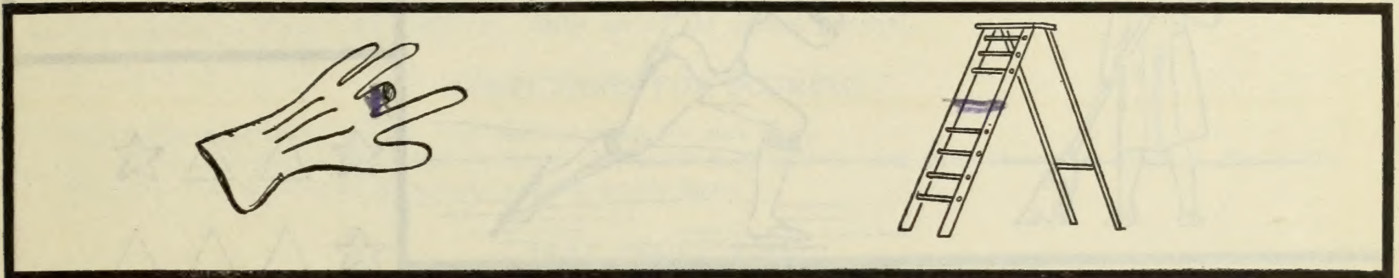

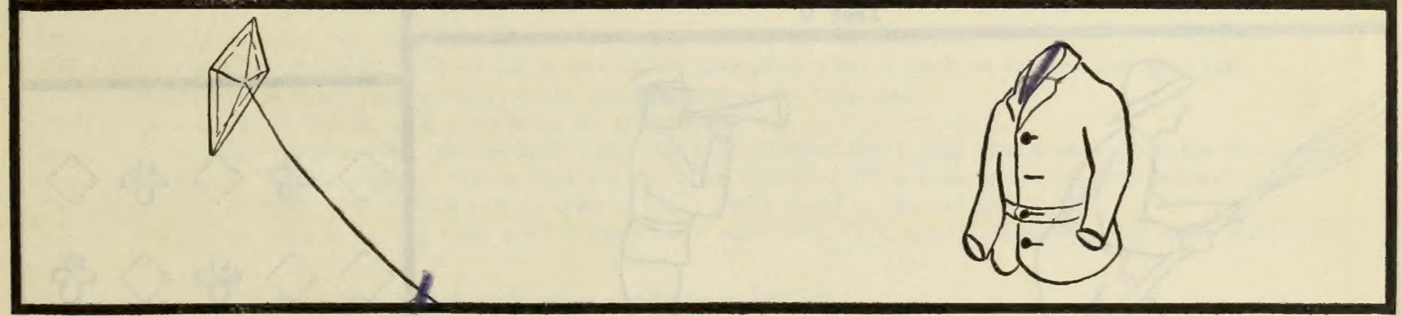

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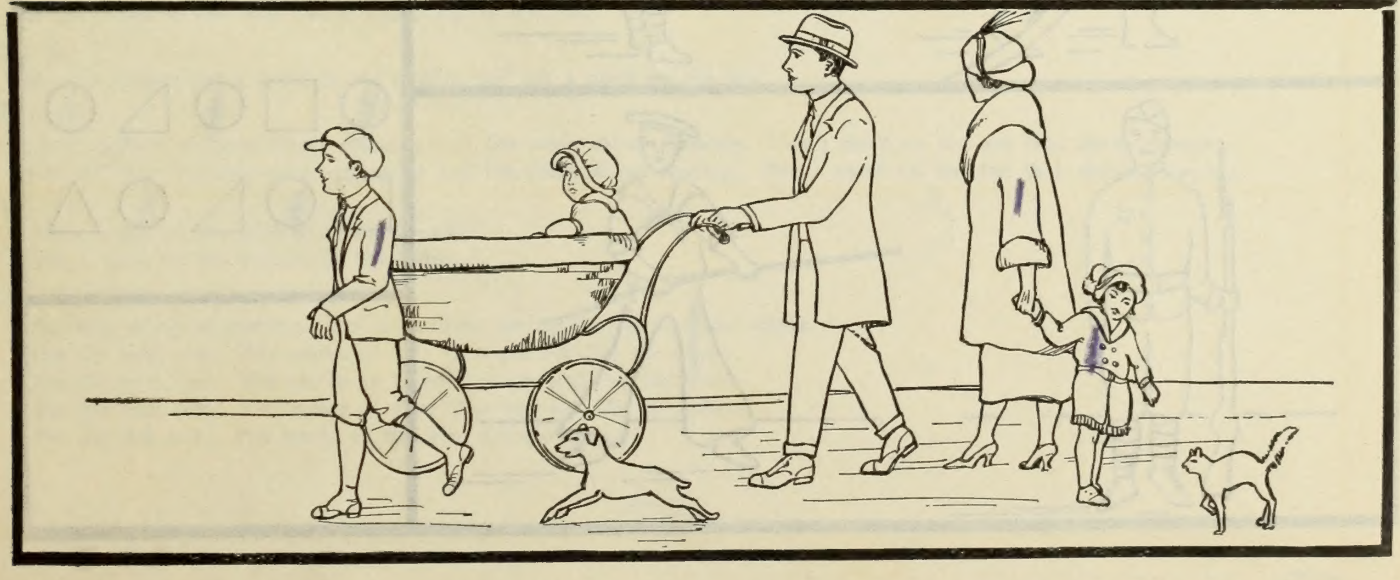

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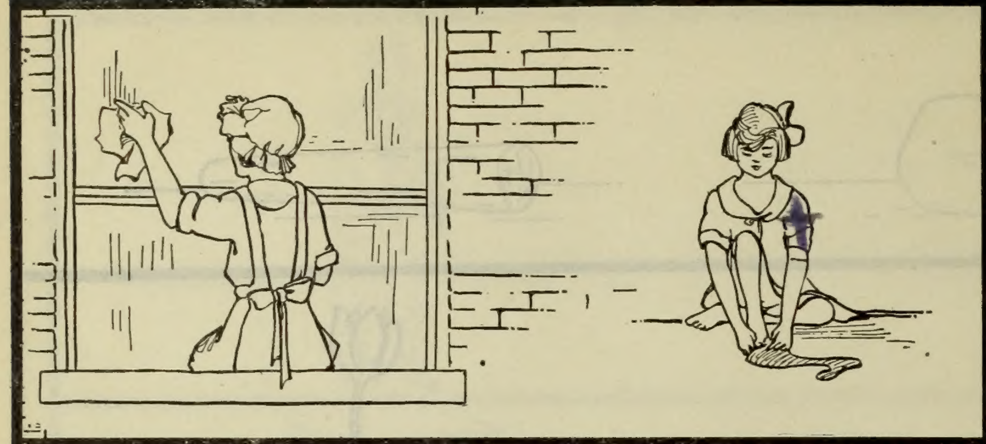

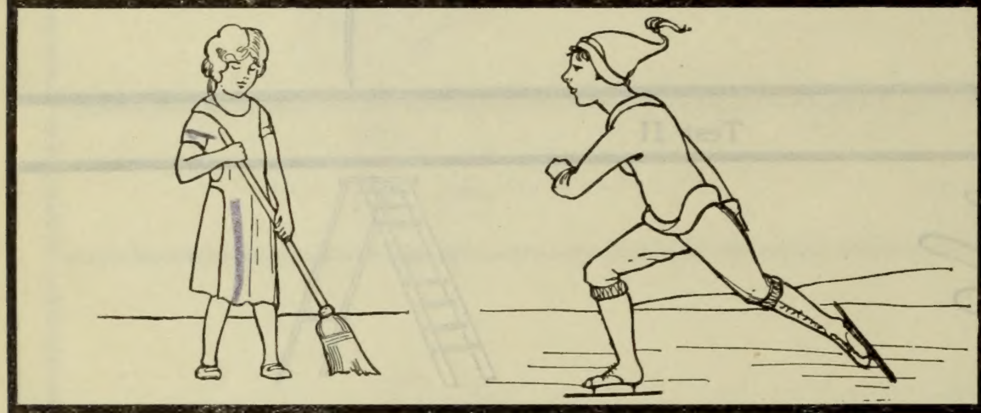

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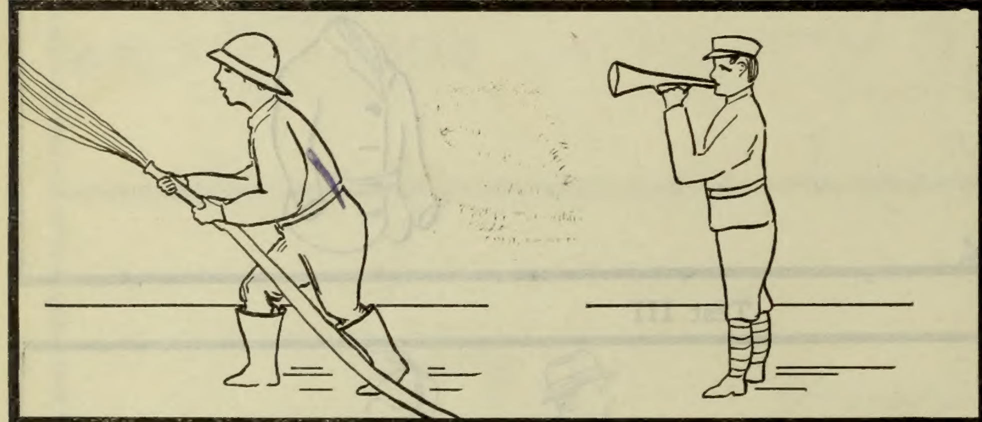

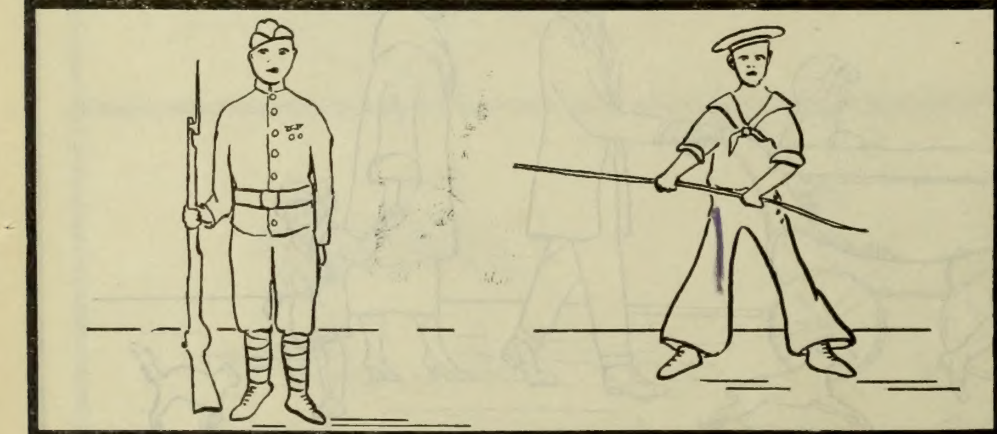

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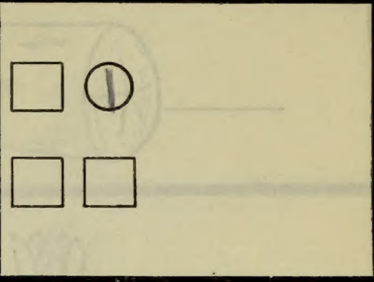

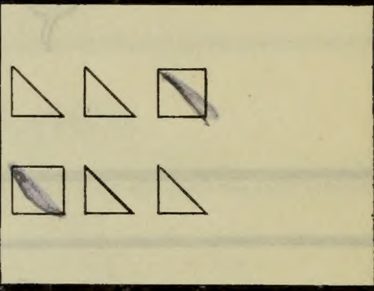

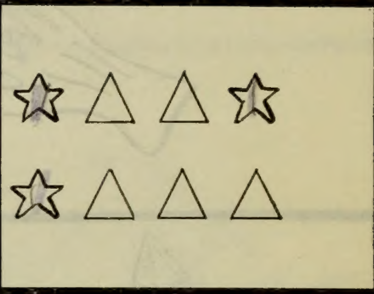

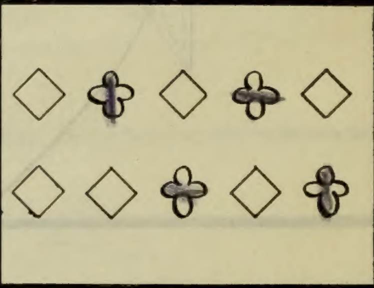

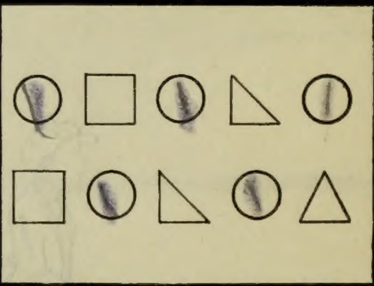

Direction Sheet
Rhode Island
Intelligence Test
Form A

Published by the
PUBLIC SCHOOL PUBLISHING CO.,
BLOOMINGTON, ILLINOIS

RHODE ISLAND INTELLIGENCE TEST, Form A

FOR CHILDREN FROM THREE TO SIX YEARS OF AGE

Devised by G. E. Bird and C. E. Craig

INSTRUCTIONS TO EXAMINER

1. Fill in the necessary information on each child's booklet before the test is given.
2. There is no time limit.
3. Directions should be followed exactly.
4. Explain to the child what is meant by putting a ''mark'' on something. Any kind of mark is acceptable.
5. Give instructions for each line slowly and distinctly. Wait until the child has finished one group of pictures before beginning the next.
6. No directions should be given more than twice.
7. Point to the row of pictures that you are describing, but be careful not to indicate the answer.
8. Do not try to memorize the directions. Make use of the printed material.

DIRECTIONS FOR SCORING

1. The highest possible score is 28. One credit is given for each item.
2. In test six, each exercise counts for two items. One credit is given if the child marks the *number* required. Two credits are given if he marks both the *number* and the correct forms.

TEST PROCEDURE

TEST 1.

See the picture of the man. See the picture of the boy. Put a mark on the one that is big.
Look at the picture of the bird. Look at the picture of the caterpillar. Put a mark on the one that goes fast.
See the pictures of two shoes. Put a mark on the one that goes on the right foot.
Here are pictures of two houses. Put a mark on the pretty one.
See the picture of the lighted candle. See the snow man. One is hot and the other is cold. Put a mark on the one that is cold.
See the hod of coal. See the bubble. One is light and the other is heavy. Put a mark on the one that is heavy.
Here are two logs of wood. One is thick and the other is thin. Put a mark on the one that is thin.
Here are two flowers. One has a long stem and the other has a short stem. Put a mark on the one that has a short stem.

TEST 2.

See this picture of a glove. Put a mark on it where something is left out.
Put a mark on the ladder where something is left out.
Put a mark on the kite where something is left out.
Put a mark on the coat where something is left out.

TEST 3.

In this picture put a mark on the mother and put a mark on the boy.

TEST 4.

One of these pictures shows cleaning and the other shows dressing. Put a mark on the one that shows dressing.
One of these pictures shows sweeping and the other shows skating. Put a mark on the one that shows sweeping.

TEST 5.

Put a mark on the picture of the fireman.
Put a mark on the picture of the sailor.

TEST 6.

See this group of pictures. Put a mark on one that is not like the others.
See the next row. Put marks on two that are not like the others.
See the next row. Put marks on three that are not like the others.
See the next row. Put marks on four that are not like the others.
See the last row. Put marks on five that are the same.

(OVER)

CLASS RECORD SHEET, Form A

City.. State.. Date..

School.. Teacher.. Age-Group..

Distribution of Scores	
Total Score	No. of Children
28	
27	
26	
25	
24	
23	
22	
21	
20	
19	
18	
17	
16	
15	
14	
13	
12	
11	
10	
9	
8	
7	
6	
5	
4	
3	
2	
1	
0	
Total	
Median	

AGE MEDIANS

Age	3—	Median	14.5
"	4—	"	16.4
"	5—	"	19.3
"	6—	"	22.3

INSTRUCTIONS

I. Use a separate class record sheet for each class. If the teacher wishes to compare the class scores with the age medians, a separate record should be made for each age group (that is, for three-year olds, four-year olds, etc. Consider a child three years of age until he has reached his fourth birthday.)

II. Arrange the papers for each group of children according to the scores on the test, putting on top of each pile the paper having the highest score.

III. To fill out the column for the "Distribution of Scores," proceed as follows: Count the number of children having scores of 28, and enter the number of them under "No. of Children" opposite the "28." Similarly, count the number of papers having scores of 27 and enter the number of these in the same column opposite "27." Proceed similarly to enter the number of test papers having each of the indicated scores.

IV. Add the numbers just entered and enter the sum after the word "Total."

V. The median is the score of the middle paper—if the number of papers is odd. If it is even the median is the average score of the middle two papers. For example, if there are 35 papers, the median score is that of the 18th paper. If there are 36 papers, the median score is the average of the scores of the 18th and 19th papers. The computed median may also be found by the statistical method. (See Rugg, H. O., Statistical Method Applied to Education. Pp. 110-114.)

(OVER)

PINTNER-CUNNINGHAM PRIMARY MENTAL TEST

FOR KINDERGARTEN AND FIRST AND SECOND GRADES

By Rudolf Pintner, Ph.D.
Professor of Educational Psychology, Teachers College, Columbia University

and Bess V. Cunningham, Ph.D.
Instructor in Kindergarten Education, Teachers College, Columbia University

EXAMINATION: FORM A

Name ....

Age..........years..........months. Date of birth..................................

Grade........................ Teacher..................................

Date of test......................19...... Examiner..................................

School ....

City ....

Test	Score
1	
2	
3	
4	
5	
6	
7	
Total	

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SPECIAL INFORMATION

Standing height............Sitting height............Weight............Head cir............

Right grip................Left grip................Lung capacity..............................

Physical defects..

....

....

Disease history..

....

....

....

Age of walking..............................Talking..................................

Cultural status of home: Very inferior, inferior, average, superior, very superior.

Years attended school..............Grades repeated..............Skipped..................

School work: Very inferior, inferior, average, superior, very superior.

Teacher's est. of I: Very inferior, inferior, average, superior, very superior.

Miscellaneous..

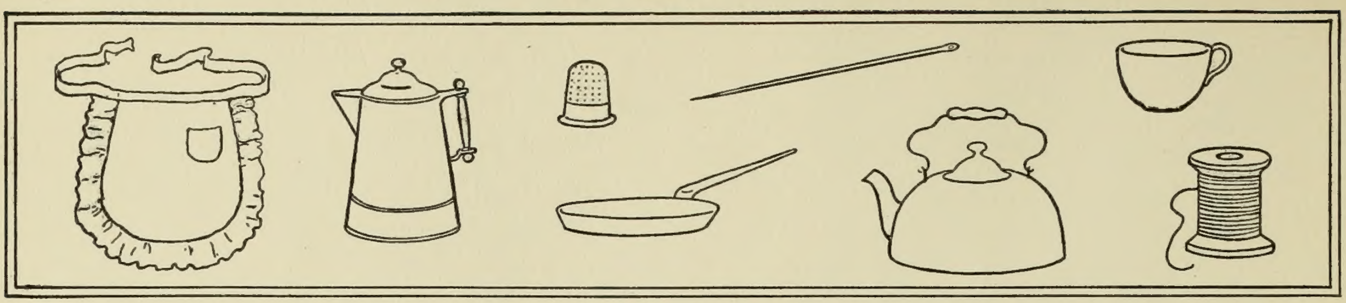
....

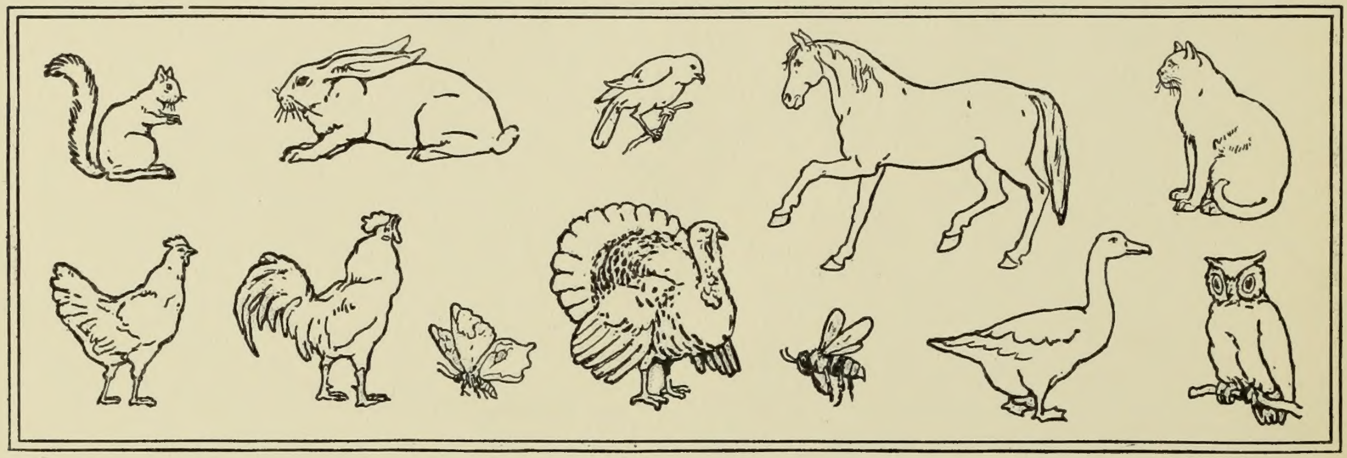
....

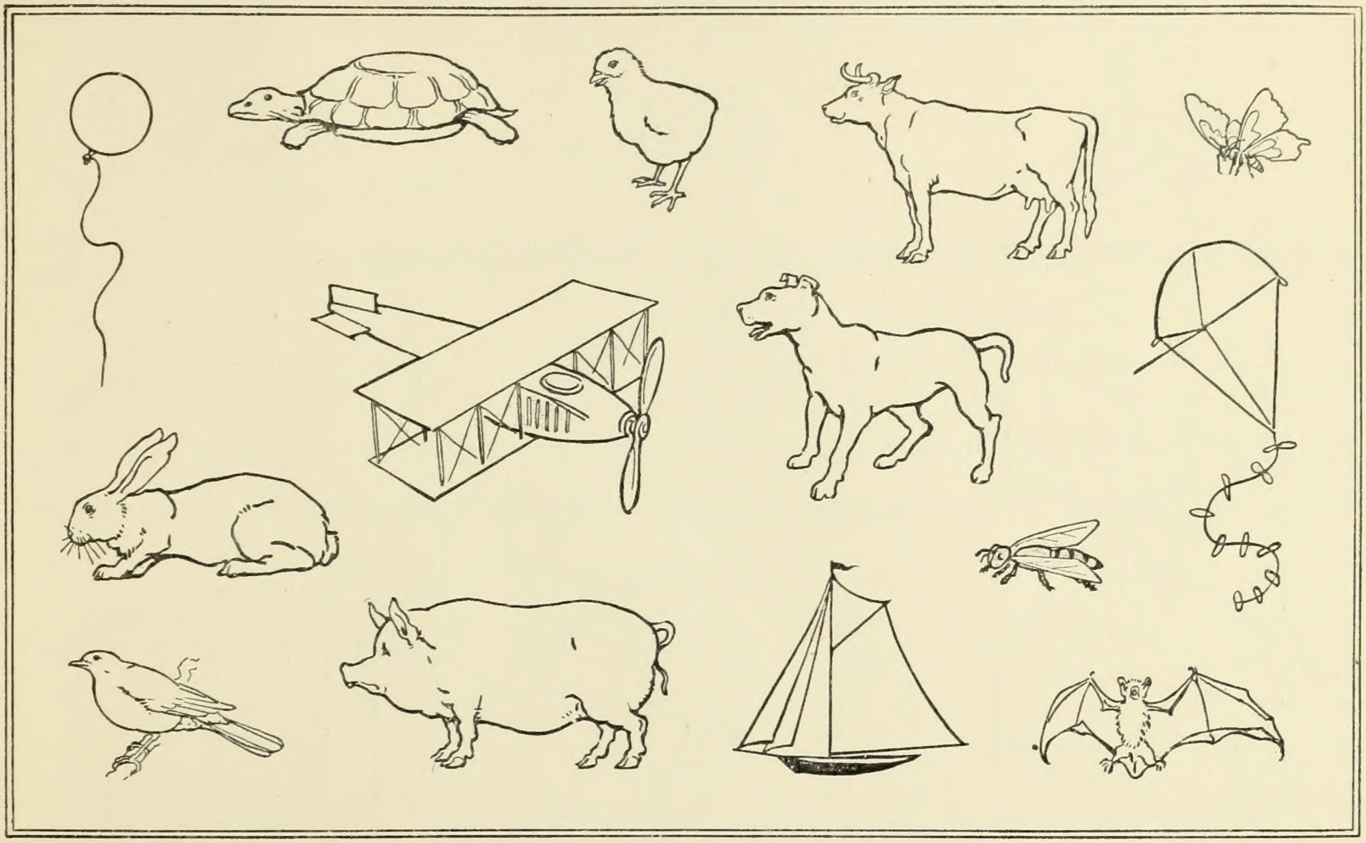
....

....

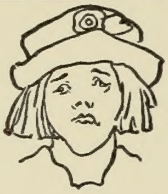
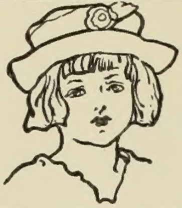
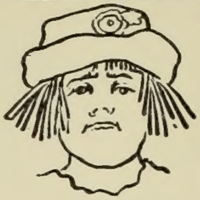
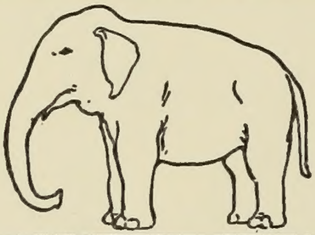
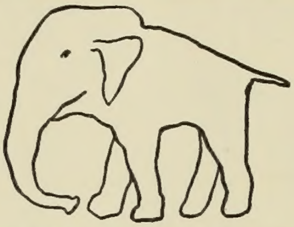
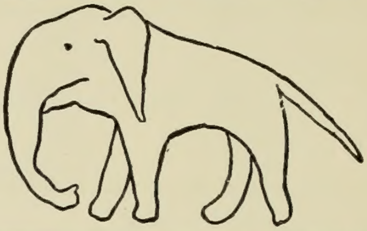
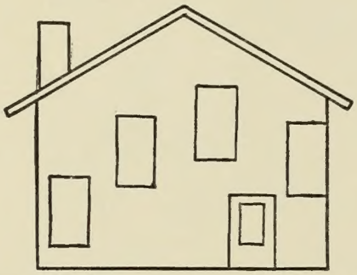
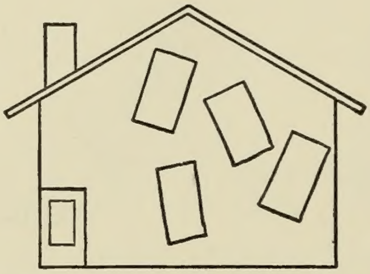
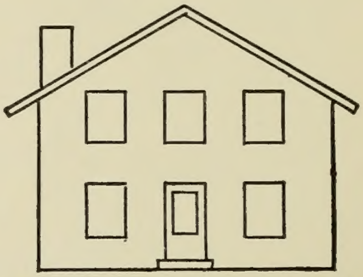
Probable limit of development..

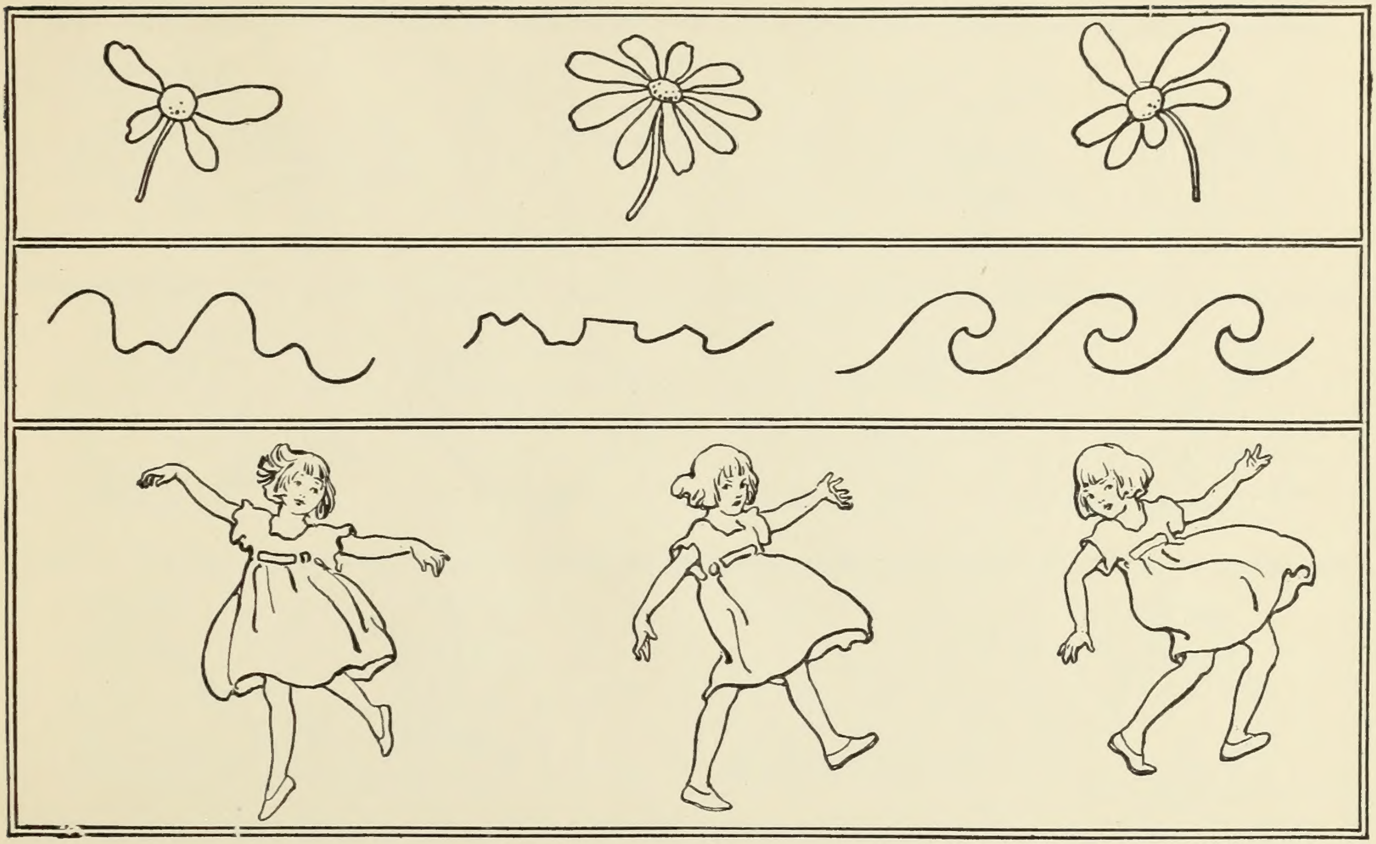






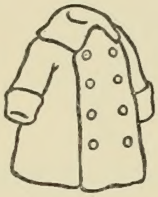
Total number right........ *Total number wrong*........ *Score* ($\frac{R-W}{2}$)..........

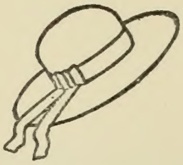










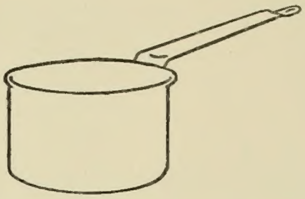


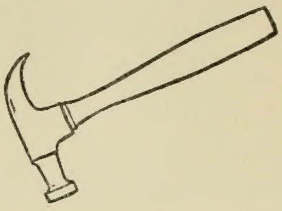
Score............

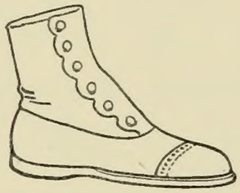
TEST 3

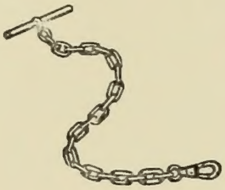


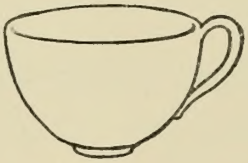


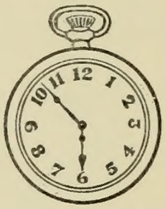


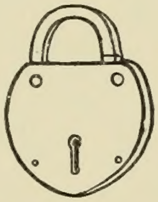


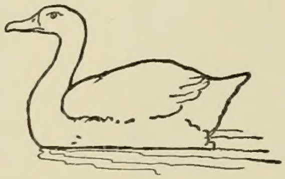


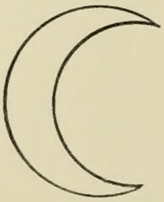


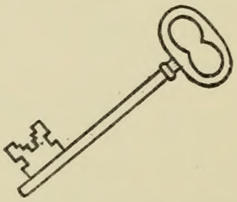


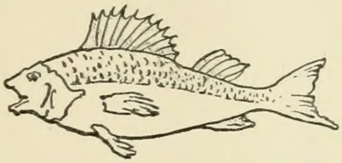
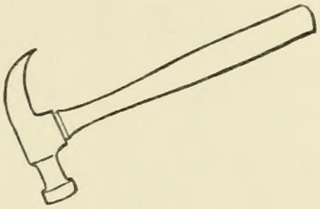
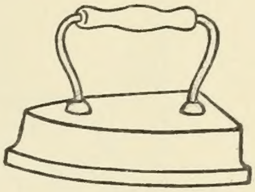
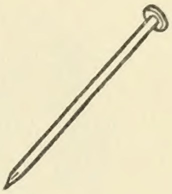
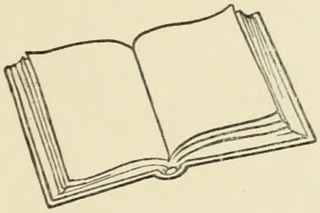
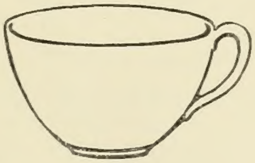
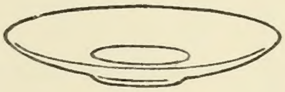
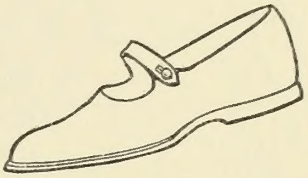
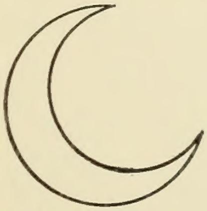
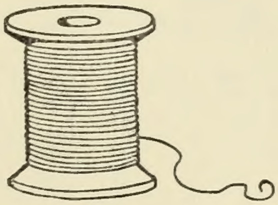
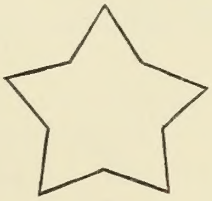
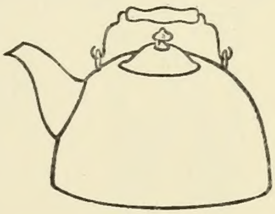










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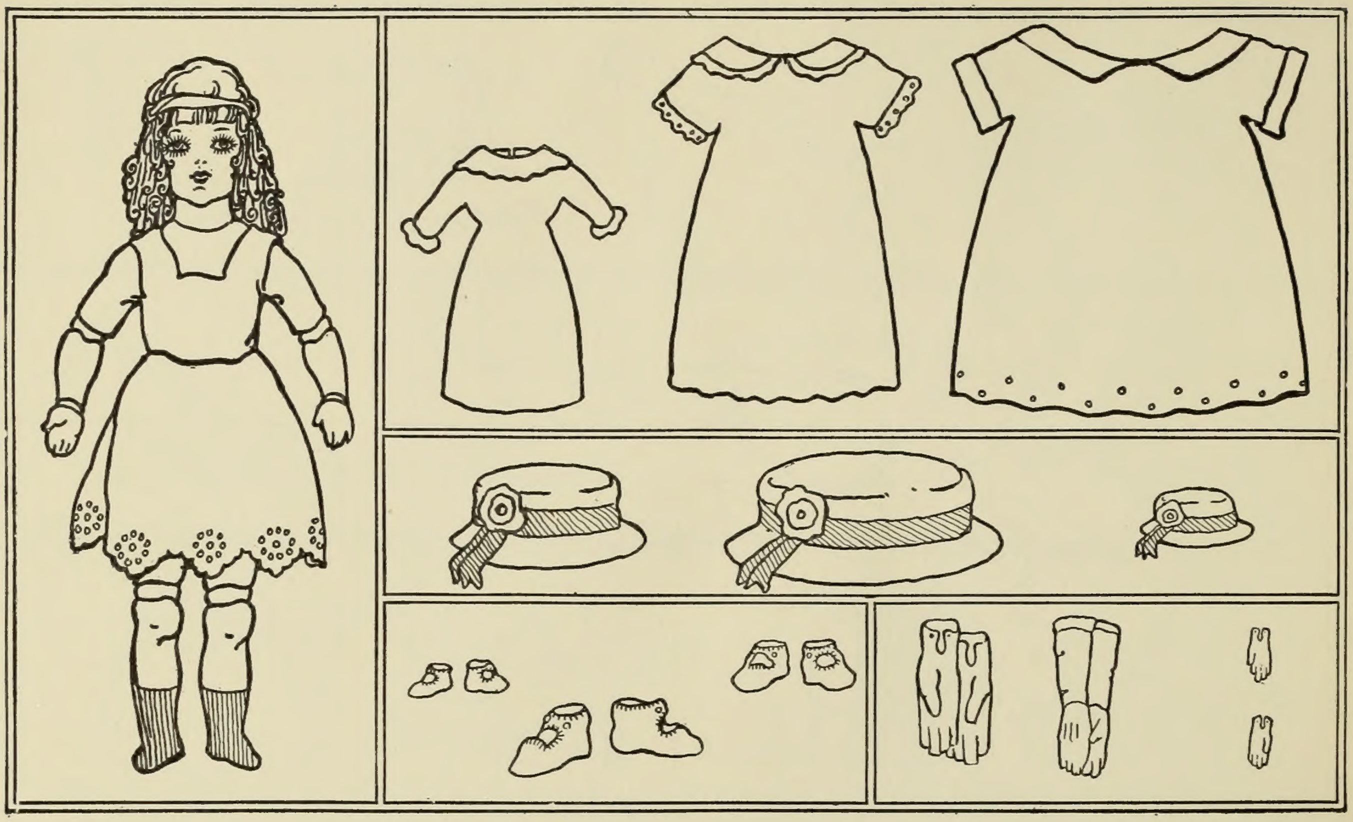

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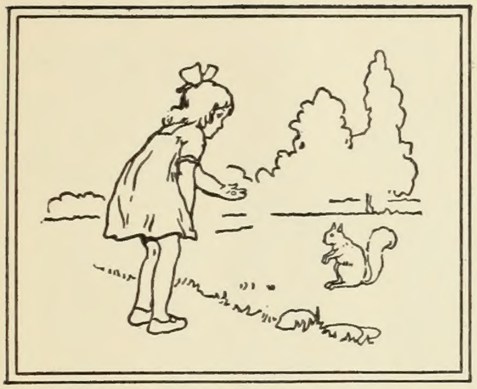
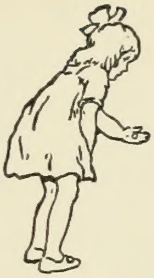
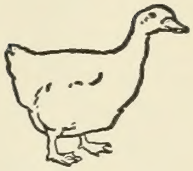
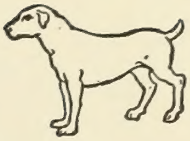
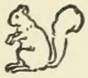
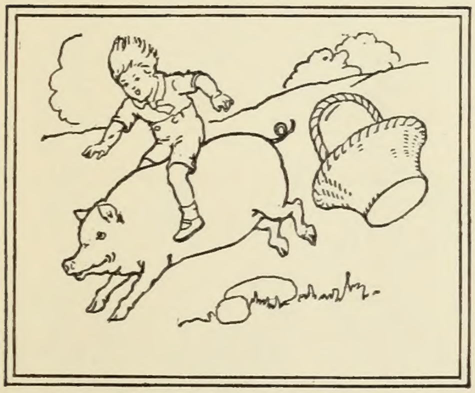


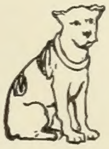


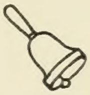


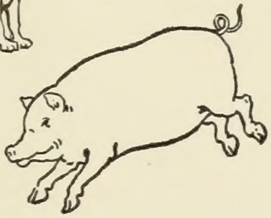


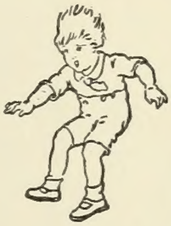


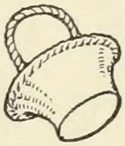


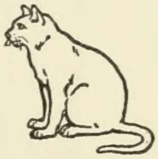


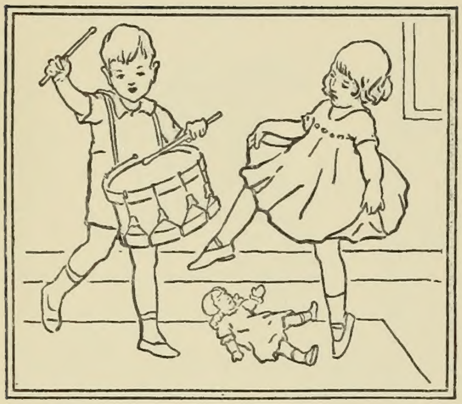


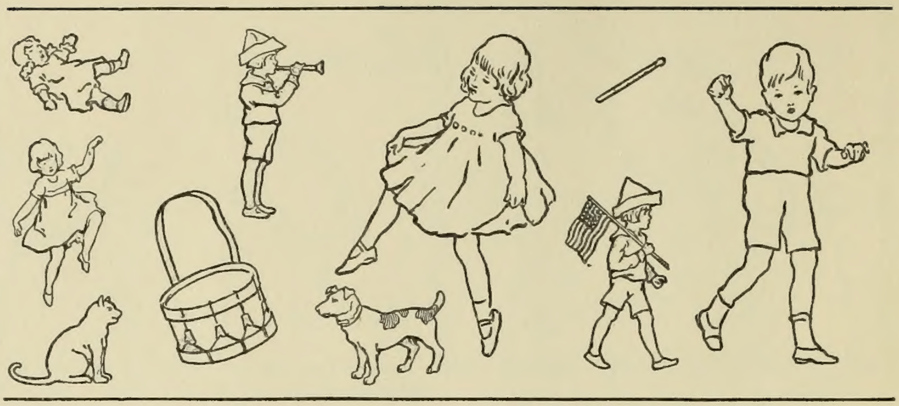


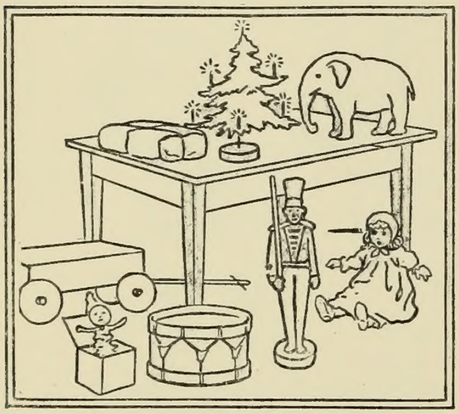


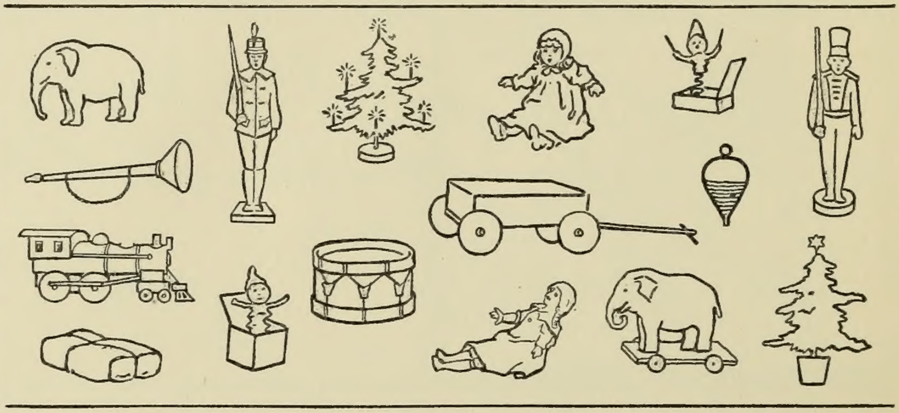


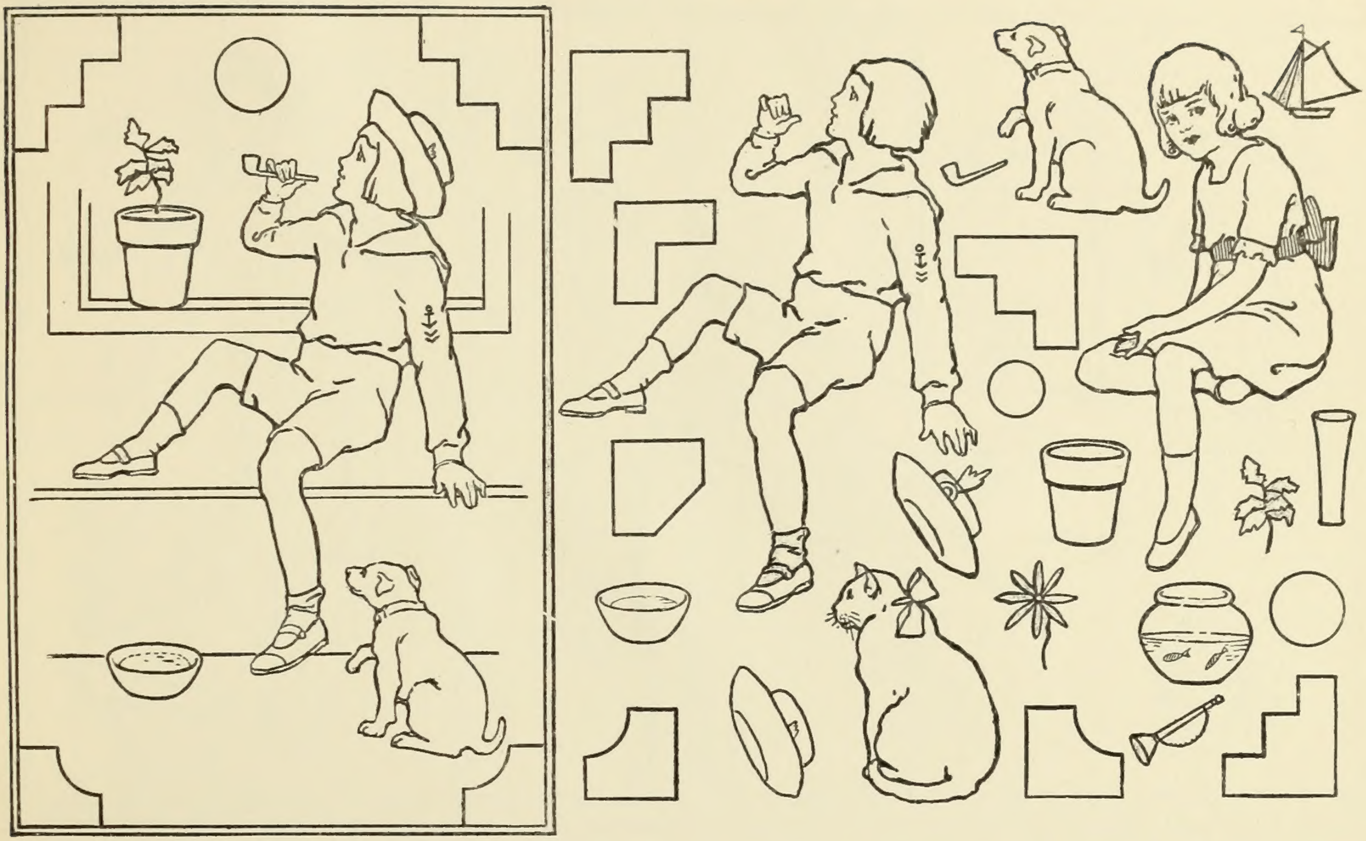




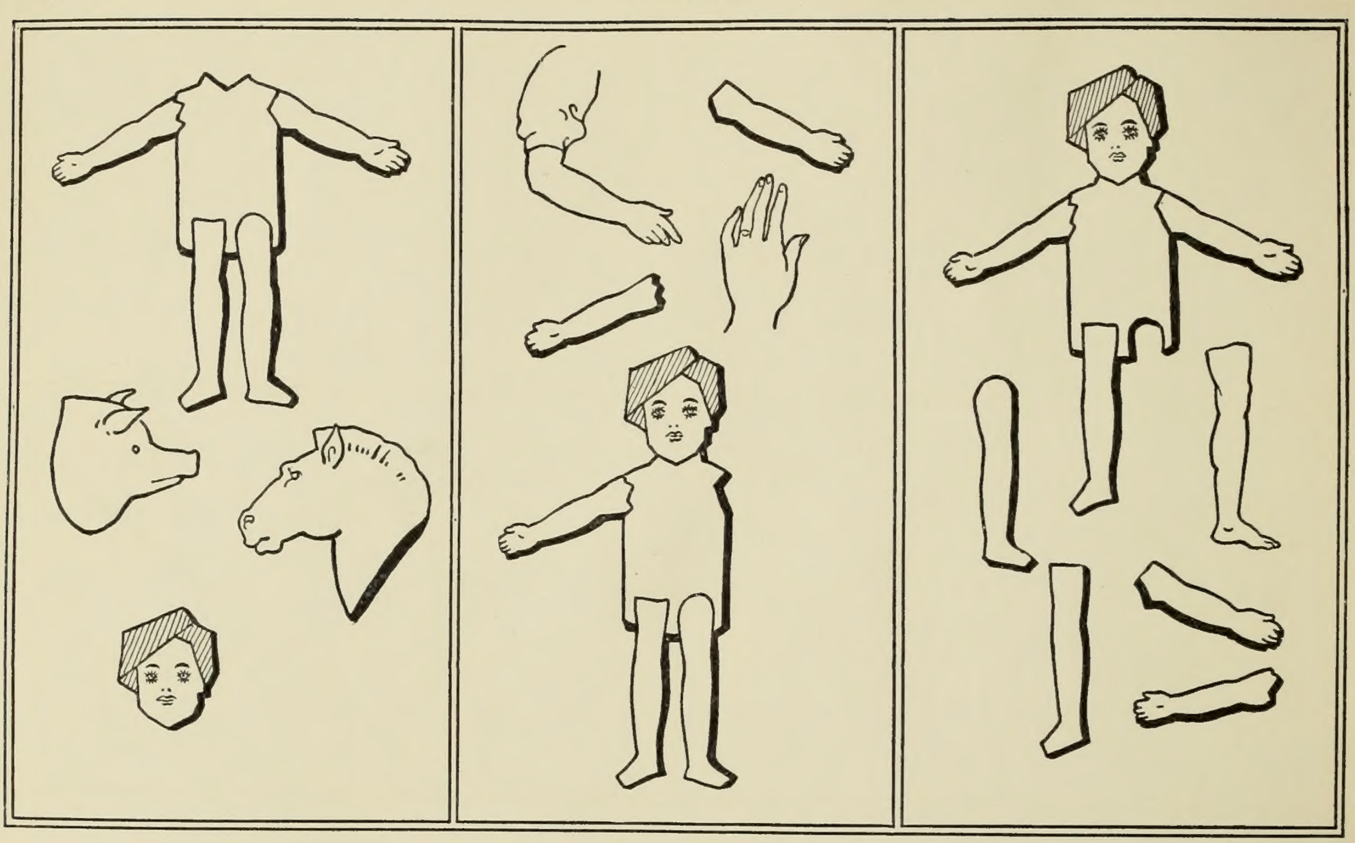


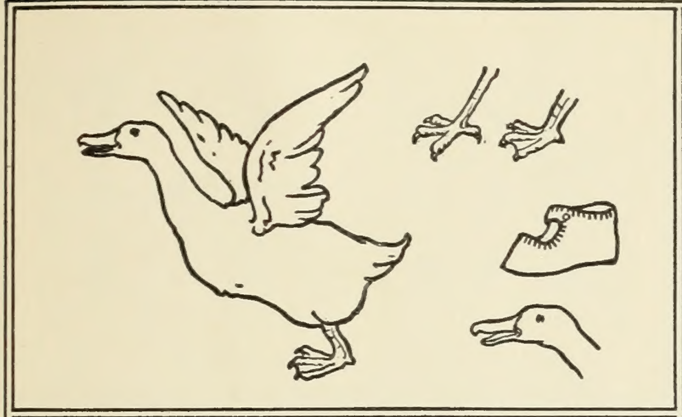


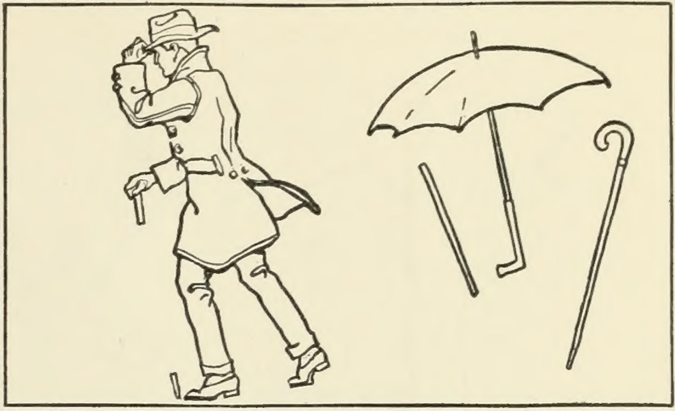


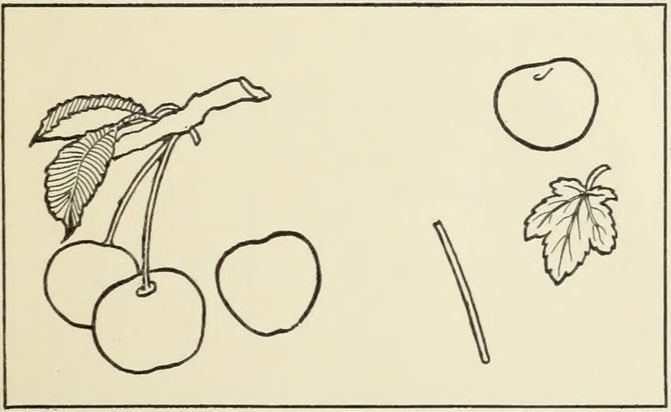


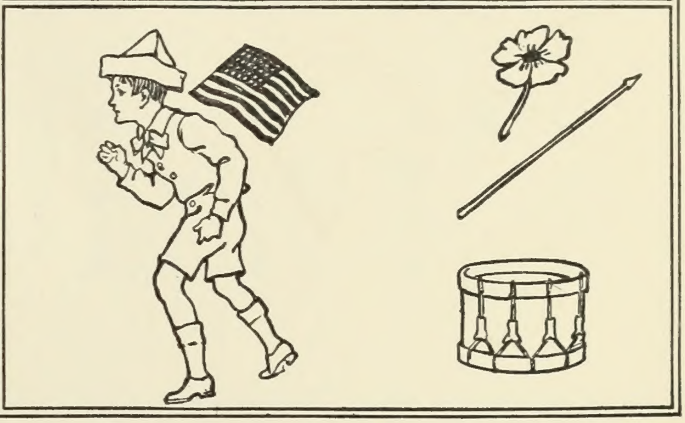
Total number right........ Total number wrong........ Score ($\frac{R-W}{2}$)..........

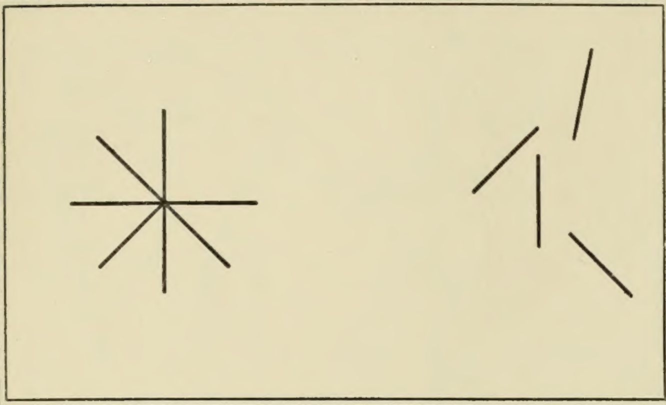


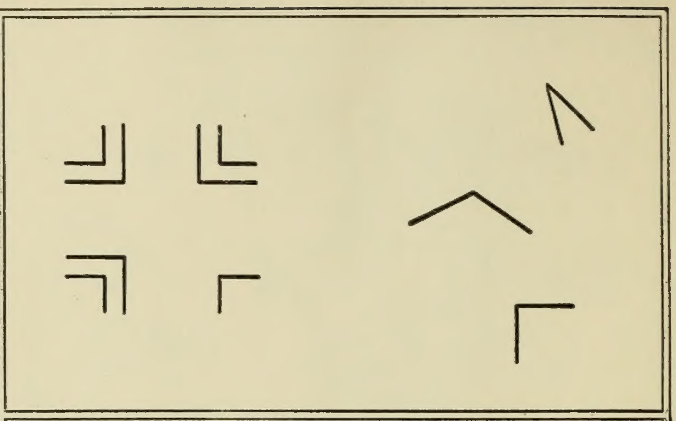


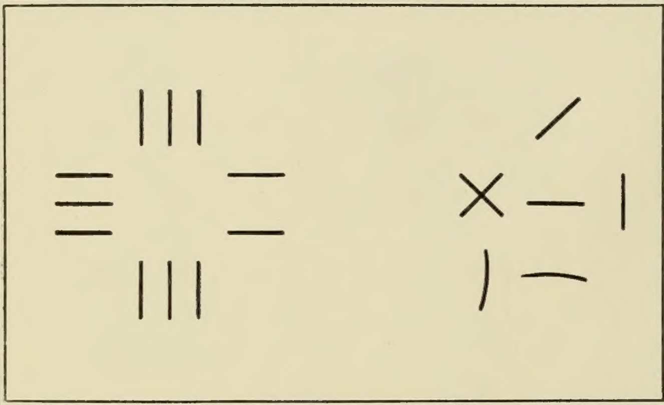


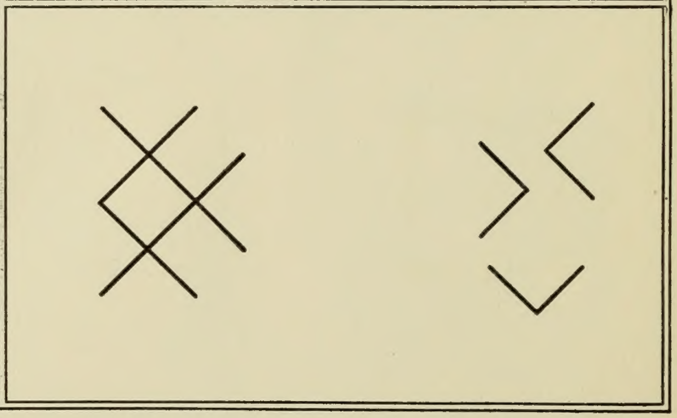




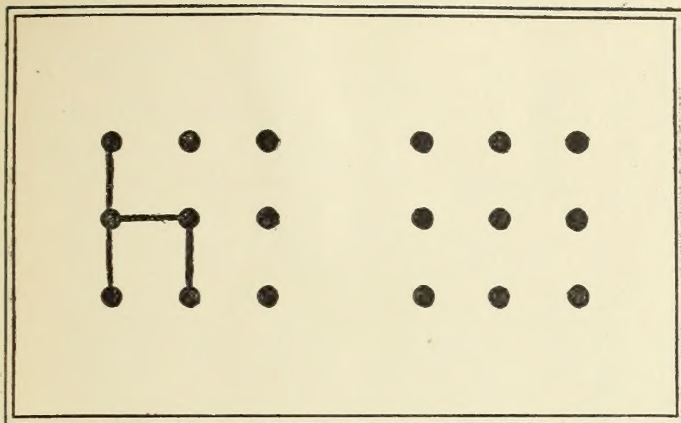


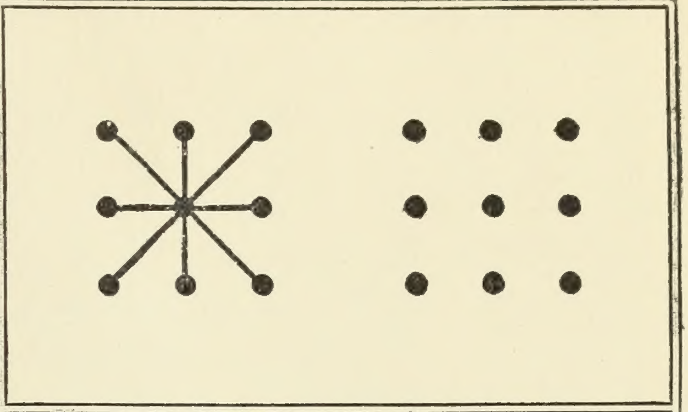


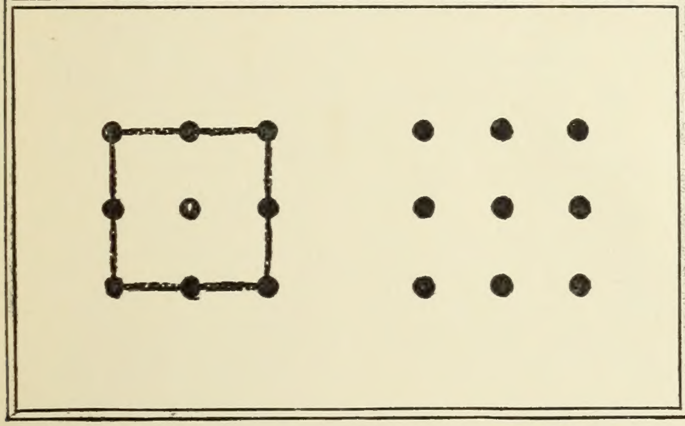


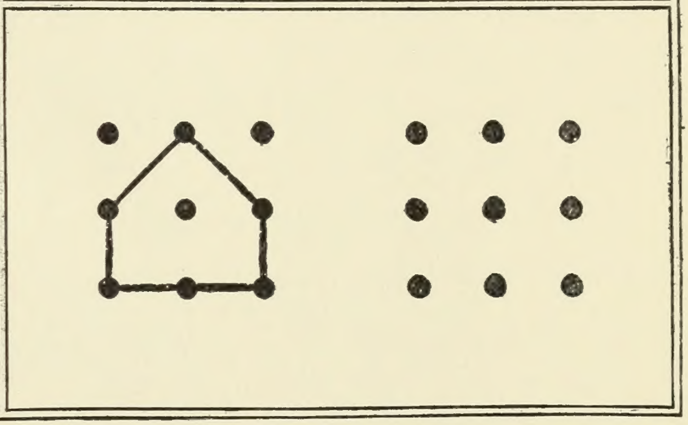


Score..........

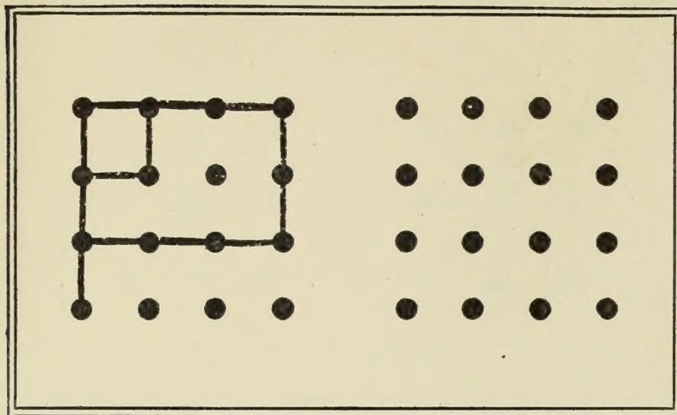


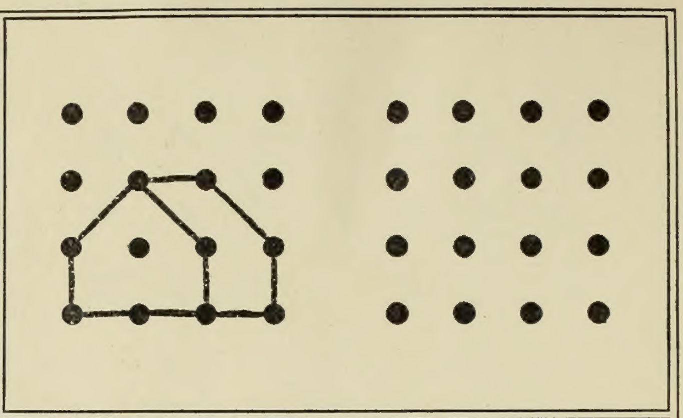


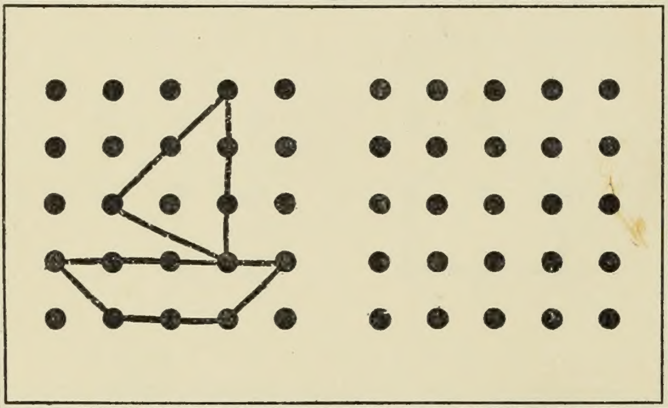


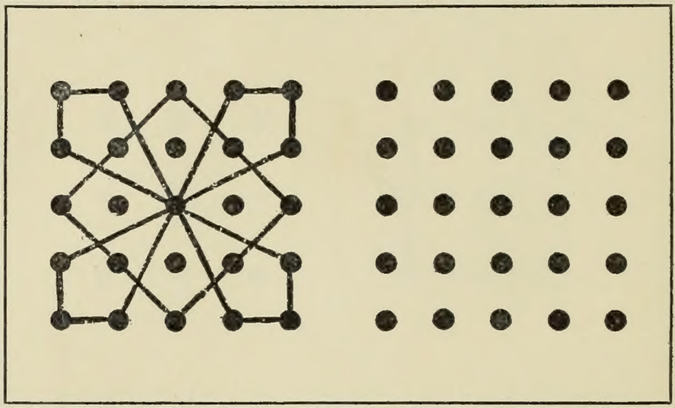


TEST 7 (*Continued*)









Score..........

RECORD BOOKLET

For The Stanford Revision of the Binet-Simon Tests as described in Terman's *The Measurement of Intelligence.*

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No...........
Series........

Name.......................................Examiner..........................
Date....................Sex.............Age............M. A...........I Q...........
Date of birth.............................Place of birth..........................
School now attended..Grade...................
Parent.............................Occupation of father.............................
Address...

NOTES ON EXAMINATION

Time begun................., finished..........., time req..............

SUMMARY

	YRS.	MOS.
3.	......	......
4.	......	......
5.	......	......
6.	......	......
7.	......	......
8.	......	......
9.	......	......
10.	......	......
12.	......	......
14.	......	......
16.	......	......
18.	......	......
Total.....		......

SPECIAL INFORMATION

Standing height............Sitting height............Weight............Head cir............
Right grip................Left grip................Lung capacity........................
Physical defects..
....
....
Disease history...
....
....
....
Age of walking..............................Talking.................................
Cultural status of home: Very inferior, inferior, average, superior, very superior.
Years attended school..............Grades repeated.............Skipped................
School work: Very inferior, inferior, average, superior, very superior.
Teacher's est. of I: Very inferior, inferior, average, superior, very superior.
Miscellaneous...
....
....
....
....
Probable limit of development...

YEAR III. (6 tests, 2 months each, or 4 tests, 3 months each.)

*1. Points to parts of body. (3 of 4.)

Nose.......... Eyes.......... Mouth.......... Hair................

*2. Names familiar objects. (3 of 5.)

Key...... Penny...... Closed knife...... Watch...... Pencil.........

*3. Pictures: Enumeration or better. (At least 3 objects in one picture.)

a. Dutch Home..

b. Canoe...

c. Post Office..

4. Gives sex. (Correct first in question.)...............................

5. Gives last name..

*6. Repeats 6-7 syllables. (1 of 3.)

a. "I have a little dog."

b. "The dog runs after the cat."

c. "In summer the sun is hot."

Alt. Repeats 3 digits. (1 of 3. Order correct. Read about 1 per second.)

6-4-1................3-5-2................8-3-7..................

YEAR IV. (6 tests, 2 months each, or 4 tests, 3 months each.)

*1. Compares lines. (3 of 3, or 5 of 6.) 1...........2...........3.........

2. Discrimination of forms. (Kuhlmann. 7 of 10.)

Circle........ Square........ Triangle........ Other errors...........

*3. Counts 4 pennies. (No error.)...

*4. Copies square. (Pencil. 1 of 3. Score leniently.) 1......2......3......

*5. Comprehension, 1st degree. (2 of 3.) "What must you do:

a. "When you are sleepy?..

b. "When you are cold?..

c. "When you are hungry?".......................................

6. Repeats 4 digits. (1 of 3. Order correct. Read about 1 per second.)

4-7-3-9...............2-8-5-4..............7-2-6-1..................

Alt. Repeats 12-13 syllables. (1 of 3 absolutely correct, or 2 with 1 error each.)

a. "The boy's name is John. He is a very good boy."

b. "When the train passes you will hear the whistle blow."

c. "We are going to have a good time in the country."

NOTE. — The tests marked with a * constitute an abbreviated scale, for use in case there is not time to give a complete test. These have been selected on the basis of reliability, rapidity with which they may be given, and for variety. If only the tests of the abbreviated scale are given they should be weighted as follows: — years III to X, 3 months for each test; Year XII, 4 months each; Year XIV, 6 months each; average adult, 7½ months each; superior adult, 9 months each.

YEAR V. (6 tests, 2 months each, or 4 tests, 3 months each.)

*1. Comparison of weights. (2 of 3. E. may illustrate procedure.)

3-15 .... 15-3 .... 3-15 ....

*2. Colors. (No error.)

Red .... Yellow .... Blue .... Green ....

*3. Æsthetic comparison. (No error.)

Upper pair .... Middle .... Lower ....

4. Definitions, use or better. (4 of 6.)

Chair .... Doll ....

Horse .... Pencil ....

Fork .... Table ....

5. Patience, or divided rectangle. (2 of 3 trials. 1 minute each.)

1 .... Time ....

2 .... Time ....

3 .... Time ....

*6. Three commissions. (No error. Order correct.)

Puts key on chair .... Shuts door .... Brings box ....

Alt. Age ....

YEAR VI. (6 tests, 2 months each, or 4 tests, 3 months each.)

*1. Right and left. (3 of 3, or 5 of 6.)

R. hand .... L. ear .... R. eye ....

*2. Mutilated pictures. (3 or 4.)

Eye .... Mouth .... Nose .... Arms ....

*3. Counts 13 pennies. (1 of 2 trials, without error.) ....

*4. Comprehension, 2d degree. (2 of 3.) "What's the thing to do:

a. "If it is raining when you start to school? ....

b. "If you find that your house is on fire? ....

c. "If you are going some place and miss your car?" ....

5. Coins. (3 of 4. Present in order given below.)

Nickel .... Penny .... Quarter .... Dime ....

6. Repeats 16-18 syllables. (1 of 3 absolutely correct, or 2 with 1 error each.)

a. "We are having a fine time. We found a little mouse in the trap."

b. "Walter had a fine time on his vacation. He went fishing every day."

c. "We will go out for a long walk. Please give me my pretty straw hat."

Alt. Morning or afternoon. (Correct first in question.) ....

YEAR VII. (6 tests, 2 months each, or 4 tests, 3 months each.)

*1. Fingers. (No error.) R.......... L.......... Both.................

*2. Pictures; Description. (2 of 3. Over half of performance description.)

a. Dutch Home..

b. Canoe..

c. Post Office..

3. Repeats 5 digits. (1 of 3. Order correct. Read about 1 per second.)

3-1-7-5-9............. 4-2-8-3-5............. 9-8-1-7-6...............

4. Ties bow knot. (Model shown. 1 minute. "Single" bow half credit.)

Time.............................Method.......................

*5. Gives differences. (2 of 3.)

a. Fly and butterfly..

b. Stone and egg..

c. Wood and glass..

*6. Copies diamond. (Pen. 2 of 3.) *a*........... *b*........... *c*..........

Alt. 1. Names days of week. (Order correct. 15 seconds. 2 of 3 checks correct.)

Mon., **Tues.,** Wed., **Thurs.,** Fri., **Sat.,** Sun.

Alt. 2. Repeats 3 digits backwards. (1 of 3. Read about 1 per second.)

2-8-3............... 4-2-7............... 9-5-8...................

YEAR VIII. (6 tests, 2 months each, or 4 tests, 3 months each.)

1. Ball and field. (Inferior plan or better.)..................................

*2. Counts 20-0. (40 seconds. 1 error allowed.) Time........Errors........

*3. Comprehension, 3rd degree. (2 of 3.) "What's the thing for you to do:

a. "When you have broken something which belongs to someone else?....

....

b. "When you are on your way to school and notice that you are in danger of being late?..

c. "If a playmate hits you without meaning to do it?"................

*4. Gives similarities, two things. (2 of 4. "In what way are wood and coal alike?" etc. Any real likeness is plus.)

a. Wood and coal..

b. Apple and peach..

c. Iron and silver..

d. Ship and automobile..

5. Definitions superior to use. (2 of 4. "Thing" as genus counts plus.)

a. Balloon..

b. Tiger..

c. Football..

d. Soldier..

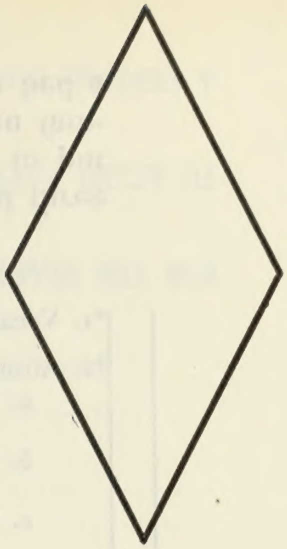
*6. Vocabulary, 20 words. Score................. Total Vocab.............

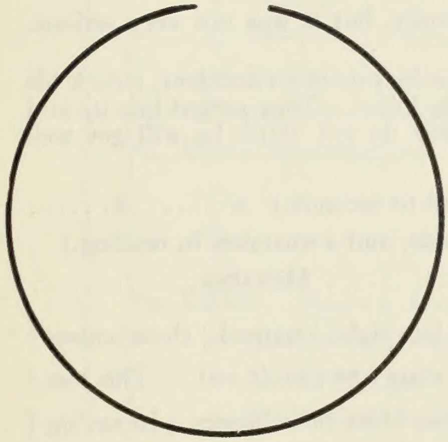
Alt. 1. Six coins. (No error. Give in order indicated.)

.05........ .01......... .25......... .10......... 1.00......... .50.......

Alt. 2. Dictation. ("See the little boy." Easily legible. Pen, 1 minute.)

Time............ Score by Ayres scale........................





"Let us suppose that your baseball has been lost in this round field. You have no idea what part of the field it is in. You don't know what direction it came from, how it got there, or with what force it came. All you know is that the ball is lost somewhere in the field. Now take this pencil and mark out a path to show me how you would hunt for the ball so as to be sure not to miss it. Begin at the gate and show me what path you would take."

YEAR IX. (6 tests, 2 months each, or 4 tests, 3 months each.)

*1. Date. (Allow error of 3 days in *c*, no error in *a*, *b*, or *d*.)
a. Day of week...... *b.* month...... *c.* day of m...... *d.* year........

*2. Weights. (3, 6, 9, 12, 15. Procedure not illustrated. 2 of 3 correct.)
a. .... Method ....
b. .... Method ....
c. .... Method ....

3. Makes change. (2 of 3. 15 seconds for each part. No coins, paper, or pencil.)
10-4.................. 15-12.................. 25-4..................

*4. Repeats 4 digits backwards. (1 of 3. Read about 1 per second.)
6-5-2-8................ 4-9-3-7................ 8-6-2-9................

*5. Three words. (2 of 3. 1 minute for each part. Oral. 1 sentence or not over 2 coördinate clauses. E. must not illustrate what a sentence is.)
a. Boy, river, ball..
b. Work, money, men..
c. Desert, rivers, lakes..

6. Rhymes. (3 rhymes for each word. 1 minute for each part. Illustrate with hat, rat, cat. 2 of 3 correct.)
a. Day.............................. Time..............
b. Mill.............................. Time..............
c. Spring.............................. Time..............

Alt. 1. Months. (15 seconds and 1 error in naming. 2 checks of 3 correct.)
Jan., Feb., Mch., **Apr.**, May, June, **July**, Aug., Sept., Oct., **Nov.**, Dec.

Alt. 2. Stamps, gives total value. (15 sec. 2d trial if individual values are known.)

New York, September 5th. — A fire last night burned three houses near the center of the city. It took some time to put it out. The loss was fifty thousand dollars, and seventeen families lost their homes. In saving a girl who was asleep in bed a fireman was burned on the hands.

YEAR X. (6 tests, 2 months each, or 4 tests, 3 months each.)

*1. Vocabulary, 30 words. Score................ Total Vocab.............

*2. Absurdities. (4 of 5.)

a. "A man said: 'I know a road from my house to the city which is down hill all the way to the city and down hill all the way back home.'"

b. "An engineer said that the more cars he had on his train the faster he could go."

c. "Yesterday the police found the body of a girl cut into 18 pieces. They believe that she killed herself."

d. "There was a railroad accident yesterday, but it was not very serious. Only 48 people were killed."

e. "A bicycle rider, being thrown from his bicycle in an accident, struck his head against a stone and was instantly killed. They picked him up and carried him to the hospital, and they do not think he will get well again."

3. Designs. (1 correct, 1 half correct. Expose 10 seconds.) *a*....... *b*......

4. Reading and report. (8 memories, 35 seconds, and 2 mistakes in reading.)

Memories.......... Time for reading.......... Mistakes............

New York. | September 5th. | — A fire | last night | burned | three houses | near the center | of the city. | It took some time | to put it out. | The loss | was fifty thousand dollars, | and seventeen families | lost their homes. | In saving | a girl | who was asleep | in bed, | a fireman | was burned | on the hands.

*5. Comprehension, 4th degree. (2 of 3. Question may be repeated.)

a. "What ought you to say when someone asks your opinion about a person you don't know very well?"..................................

b. "What ought you to do before undertaking (beginning) something very important?"..

c. "Why should we judge a person more by his actions than by his words?"

....

*6. 60 words. (Score half-minutes separately. Illustrate with clouds, dog, chair, happy., 1........2........3........4........5........6...........

Method...................................

Atl. 1. Repeats 6 digits. (1 of 2. Order correct. Read about 1 per second.)

3-7-4-8-5-9...................5-2-1-7-4-6...................

Alt. 2. Repeats 20-22 syllables. (1 of 3 correct, or 2 with 1 error each.)

a. "The apple tree makes a cool pleasant shade on the ground where the children are playing."

b. "It is nearly half-past one o'clock; the house is very quiet and the cat has gone to sleep."

c. "In summer the days are very warm and fine; in winter it snows and I am cold."

Alt. 3. Form board. (Healy-Fernald Puzzle A. 3 times in 5 minutes.)

Time: *a*........*b*........*c*........ Method.....................

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TO ASKED PAPER MY TEACHER CORRECT I MY

FOR THE STARTED AN WE COUNTRY EARLY AT HOUR

YEAR XII. (8 tests, 3 months each, or 6 tests, 4 months each.)

*1. Vocabulary, 40 words. Score............. Total Vocab...............

2. Abstract words. (3 of 5.)
   - *a.* Pity..
   - *b.* Revenge..
   - *c.* Charity..
   - *d.* Envy..
   - *e.* Justice..

3. Ball and field. (Superior plan.)..

*4. Dissected sentences. (2 of 3. 1 minute each.)
   - *a.* .... Time..................
   - *b.* .... Time..................
   - *c.* .... Time..................

*5. Fables. (Score 4, *i. e.*, two correct or the equivalent in half credits.)
   - *a.* Hercules and wagoner..
   - *b.* Maid and eggs..
   - *c.* Fox and crow..
   - *d.* Farmer and stork..
   - *e.* Miller, son and donkey..

*6. Repeats 5 digits backwards. (1 of 3. Read about 1 per second.)
   3-1-8-7-9............ 6-9-4-8-2............ 5-2-9-6-1............

*7. Pictures; Interpretation. (3 of 4.)
   - *a.* Dutch Home..
     ....
     ....
   - *b.* Canoe..
     ....
     ....
   - *c.* Post Office..
     ....
     ....
   - *d.* Colonial Home..
     ....
     ....

*8. Gives similarities, three things. (3 of 5. "In what way are —, —, —, alike?")
   - *a.* Snake, cow, sparrow..
   - *b.* Book, teacher, newspaper..
   - *c.* Wool, cotton, leather..
   - *d.* Knife-blade, penny, piece of wire..
   - *e.* Rose, potato, tree..

If a man's salary is $20 a week and he spends $14 a week, how long will it take him to save $300?

If 2 pencils cost 5 cents, how many pencils can you buy for 50 cents?

At 15 cents a yard, how much will 7 feet of cloth cost?

YEAR XIV. (6 tests, 4 months each, or 4 tests, 6 months each.)

*1. Vocabulary, 50 words. Score.................. Total Vocab...........

2. Induction test. (Gets rule by 6th folding.)

1........2........3........4........5........6........ Rule......

*3. President and king. (Power...... accession......tenure........ 2 of 3.)

a. ....

b. ....

c. ....

*4. Problems of fact. (2 of 3. Query on *a* and *b.*)

a. "A man who was walking in the woods near a city stopped suddenly, very much frightened, and then ran to the nearest policeman, saying that he had just seen hanging from the limb of a tree a———a what?"

....

b. "My neighbor has been having queer visitors. First a doctor came to his house, then a lawyer, then a minister (preacher or priest). What do you think happened there?"

....

c. "An Indian who had come to town for the first time in his life saw a white man riding along the street. As the white man rode by the Indian said — 'The white man is lazy; *he walks sitting down.*' What was the white man riding on that caused the Indian to say 'he walks sitting down'?"

....

*5. Arithmetical reasoning. (1 minute each. 2 of 3.)

a. Save $300............................ Time....................

b. Pencils............................ Time....................

c. Cloth............................ Time....................

6. Clock. (2 of 3. Error must not exceed 3 or 4 minutes.)

6:22............................ Time required.............

8:08............................ Time required.............

2:46............................ Time required.............

Alt. Repeats 7 digits. (1 of 2. Order correct. Read about 1 per second.)

2-1-8-3-4-3-9................ 9-7-2-8-4-7-5..................

YEAR XVI, AVERAGE ADULT. (6 tests, 5 months each, or 4 tests, 7½ months each.)

*1. Vocabulary, 65 words. Score................ Total Vocab..............

*2. Interpretation of fables. (Score 8.)

a. Hercules and wagoner..

b. Maid and eggs..

c. Fox and crow...

d. Farmer and stork..

e. Miller, son and donkey...

3. Difference between abstract words. (3 real contrasts out of 4.)

a. Laziness and idleness...

b. Evolution and revolution...

c. Poverty and misery..

d. Character and reputation...

*4. Problem of the enclosed boxes. (3 of 4.) One large box containing:

a. 2 smaller, 1 inside of each...

b. 2 smaller, 2 inside of each...

c. 3 smaller, 3 inside of each...

d. 4 smaller, 4 inside of each...

*5. Repeats 6 digits backwards. (1 of 3. Read about 1 per second.)

4-7-1-9-5-2.......... 5-8-3-2-9-4.......... 7-5-2-6-3-8.............

6. Code, writes "Come quickly." (2 errors. 6 minutes. Omission of dot counts half error. Illustrate with "spy" and "trench.")

Errors..........C-O-M-E Q-U-I-C-K-L-Y..........Time..........

Method..

Alt. 1. Repeats 28 syllables. (1 of 2 absolutely correct.)

a. Walter likes very much to go on visits to his grandmother, because she always tells him many funny stories.

b. Yesterday I saw a pretty little dog in the street. It had curly brown hair, short legs, and a long tail.

Alt. 2. Comprehension of physical relations. (2 of 3.)

a. Path of cannon ball...

....

b. Weight of fish in water...

....

c. Hitting distant mark...

....

XVIII, SUPERIOR ADULT. (6 tests, 6 months each, or 4 tests, 9 months each.)

*1. Vocabulary, 75 words. Score.................. Total Vocab............

2. Binet's paper cutting test. Folds....... Holes....... Location..........
(If given, must come before XIV₂.)

*3. Repeats 8 digits. (1 of 3. Order correct. Read about 1 per second.)
7-2-5-3-4-8-9-6.......... 4-9-8-5-3-7-6-2.......... 8-3-7-9-5-4-8-2......

*4. Repeats thought of passage heard. (1 of 2. E. reads each in about ½ min.)
"I am going to read a little selection of about six or eight lines. When I am through I will ask you to repeat as much of it as you can. It doesn't make any difference whether you remember the exact words or not, but you must listen carefully so that you can tell me everything it says."

a. "Tests such as we are now making are of value both for the advancement of science and for the information of the person who is tested. It is important for science to learn how people differ and on what factors these differences depend. If we can separate the influence of heredity from the influence of environment we may be able to apply our knowledge so as to guide human development. We may thus in some cases correct defects and develop abilities which we might otherwise neglect."

....

....

....

....

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....

b. "Many opinions have been given on the value of life. Some call it good, others call it bad. It would be nearer correct to say that it is mediocre, for on the one hand our happiness is never as great as we should like, and on the other hand our misfortunes are never as great as our enemies would wish for us. It is this mediocrity of life which prevents it from being radically unjust."

....

....

....

....

....

....

....

*5. Repeats 7 digits backwards. (1 of 3. Read about 1 per second.)
4-1-6-2-5-9-3............ 3-8-2-6-4-7-5............ 9-4-5-2-8-3-7.......

6. Ingenuity test. (2 of 3. 5 minutes each. If S fails on 1st, E explains that one.)

a. "A mother sent her boy to the river to get seven pints of water. She gave him a 3-pint vessel and a 5-pint vessel. Show me how the boy can measure out exactly 7 pints without guessing at the amount. Begin by filling the 5-pint vessel."

....

....

b. Same, except 5 and 7 given to get 8. ("Begin with 5.")

....

....

c. Same, except 4 and 9 given to get 7. ("Begin with 4.")

....

....

"Fables, you know, are little stories which teach us a lesson. Now I am going to read a fable to you. Listen carefully and when I am through I will ask you to tell what lesson the fable teaches us."

After reading each fable say, "What lesson does that teach us?" Ask also if fable has been heard before.

A. HERCULES AND THE WAGONER

A man was driving along a country road, when the wheels suddenly sank in a deep rut. The man did nothing but look at the wagon and call loudly to Hercules to come and help him. Hercules came up, looked at the man, and said: "Put your shoulder to the wheel, my man, and whip up your oxen." Then he went away and left the driver.

Lesson ....

....

....

B. THE MILKMAID AND HER PLANS

A milkmaid was carrying her pail of milk on her head, and was thinking to herself thus: "The money for this milk will buy 4 hens; the hens will lay at least 100 eggs; the eggs will produce at least 75 chicks; and with the money which the chicks will bring I can buy a new dress to wear instead of the ragged one I have on." At this moment she looked down at herself, trying to think how she would look in her new dress; but as she did so the pail of milk slipped from her head and dashed upon the ground. Thus all her imaginary schemes perished in a moment.

Lesson ....

....

....

C. THE FOX AND THE CROW

A crow, having stolen a bit of meat, perched in a tree and held it in her beak. A fox, seeing her, wished to secure the meat, and spoke to the crow thus: "How handsome you are! and I have heard that the beauty of your voice is equal to that of your form and feathers. Will you not sing for me, so that I may judge whether this is true?" The crow was so pleased that she opened her mouth to sing and dropped the meat, which the fox immediately ate.

Lesson ....

....

....

D. THE FARMER AND THE STORK

A farmer set some traps to catch cranes which had been eating his seed. With them he caught a stork. The stork, which had not really been stealing, begged the farmer to spare his life, saying that he was a bird of excellent character, that he was not at all like the cranes, and that the farmer should have pity on him. But the farmer said: "I have caught you with these robbers, the cranes, and you have got to die with them."

Lesson ....

....

....

E. THE MILLER, HIS SON, AND THE DONKEY

A miller and his son were driving their donkey to a neighboring town to sell him. They had not gone far when a child saw them and cried out: "What fools those fellows are to be trudging along on foot when one of them might be riding." The old man, hearing this, made his son get on the donkey, while he himself walked. Soon they came upon some men. "Look," said one of them, "see that lazy boy riding while his old father has to walk." On hearing this the miller made his son get off, and he climbed upon the donkey himself. Farther on they met a company of women, who shouted out: "Why, you lazy old fellow, to ride along so comfortably while your poor boy there can hardly keep pace by the side of you!" And so the good-natured miller took his boy up behind him and both of them rode. As they came to the town a citizen said to them, "Why, you cruel fellows! you two are better able to carry the poor little donkey than he is to carry you." "Very well," said the miller, "we will try." So both of them jumped to the ground, got some ropes, tied the donkey's legs to a pole and tried to carry him. But as they crossed the bridge the donkey became frightened, kicked loose and fell into the stream.

Lesson ....

....

....

VOCABULARY

Score on List 1..........Score on List 2..........Total......

1. gown..........
2. tap..........
3. scorch..........
4. puddle..........
5. envelope..........
6. rule..........
7. health..........
8. eye-lash..........
9. copper..........
10. curse..........
11. pork..........
12. outward..........
13. southern..........
14. lecture..........
15. dungeon..........
16. skill..........
17. ramble..........
18. civil..........
19. insure..........
20. nerve..........
21. juggler..........
22. regard..........
23. stave..........
24. brunette..........
25. hysterics..........
26. Mars..........
27. mosaic..........
28. bewail..........
29. priceless..........
30. disproportionate..........
31. tolerate..........
32. artless..........
33. depredation..........
34. lotus..........
35. frustrate..........
36. harpy..........
37. flaunt..........
38. ochre..........
39. milksop..........
40. incrustation..........
41. retroactive..........
42. ambergris..........
43. achromatic..........
44. perfunctory..........
45. casuistry..........
46. piscatorial..........
47. sudorific..........
48. pärterre..........
49. shagreen..........
50. complot..........

1. orange..........
2. bonfire..........
3. straw..........
4. roar..........
5. haste..........
6. afloat..........
7. guitar..........
8. mellow..........
9. impolite..........
10. plumbing..........
11. noticeable..........
12. muzzle..........
13. quake..........
14. reception..........
15. majesty..........
16. treasury..........
17. misuse..........
18. crunch..........
19. forfeit..........
20. sportive..........
21. apish..........
22. snip..........
23. shrewd..........
24. repose..........
25. peculiarity..........
26. conscientious..........
27. charter..........
28. coinage..........
29. dilapidated..........
30. promontory..........
31. avarice..........
32. gelatinous..........
33. drabble..........
34. philanthropy..........
35. irony..........
36. embody..........
37. swaddle..........
38. exaltation..........
39. infuse..........
40. selectman..........
41. declivity..........
42. laity..........
43. fen..........
44. sapient..........
45. cameo..........
46. theosophy..........
47. precipitancy..........
48. paleology..........
49. homunculus..........
50. limpet..........

NOTE: To get the *entire vocabulary*, multiply the number of correct definitions by 180, if both lists are given; if only one list is given, multiply by 360. To get the *score* when only one list is given, multiply the number of correct definitions by 2.

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RESULT OF TESTS
ARRANGED IN ORDER OF GOODENOUGH
-Table 10-

School A
1928 - 1929.

DETROIT			GOODENOUGH			RHODE ISLAND			CHRON. AGE Oct 1928	NAME	RANK
SCORE	MENTAL AGE	I.Q.	SCORE	MENTAL AGE	I.Q.	SCORE	MENTAL AGE	I.Q.			
43	7-2	119	27	9-9	152	26	7-3	113	6-0	G.J	1
38	6-9	114	24	9-0	142	26	7-3	113	5-11	B.W.	2
33	6-4	123	14	6-9	121	25	6-11	124	5-2	B.G.	3
18	5-3	90	18	7-6	120	21	5-7	89	5-10	A.D.	4
41	7-0	129	16	7-0	120	25	6-11	117	5-5	C.S.	4
41	7-0	133	15	6-9	119	27	7-7	133	5-3	Lr.T.	5
39	6-10	119	17	7-3	119	21	5-7	95	6-0	G.R.	5
29	6-0	116	13	6-3	112	26	7-3	129	5-2	R.A.	6
19	5-4	102	13	6-3	110	21	5-7	98	5-3	V.A	7
19	5-4	102	13	6-3	110	25	6-11	122	5-3	B.C	7
25	5-8	111	12	6-0	109	24	6-7	119	5-1	A.C.	8
22	5-6	106	12	6-0	107	22	5-11	104	5-2	A.M.	9
29	6-0	111	13	6-3	107	25	6-11	118	5-5	R.L.	9
25	5-8	108	12	6-0	106	22	5-11	104	5-3	L.T.	10
31	6-2	103	15	6-9	105	26	7-3	113	6-0	G.R.	11
23	5-7	105	12	6-0	104	24	6-7	113	5-4	P.C.	12
43	7-2	116	15	6-9	103	27	7-7	115	6-2	C.B	13
19	5-4	103	11	5-9	103	22	5-11	106	5-2	F.D	13
49	7-8	119	16	7-0	102	26	7-3	106	6-5	R.R	14
23	5-7	112	10	5-6	102	23	6-3	115	5-0	A.K	14
34	6-5	107	14	6-6	101	25	6-11	108	6-0	J.P.	15
33	6-4	90	16	7-0	93	23	6-3	87	7-1	F.L.	16
28	5-11	100	11	5-9	91	25	6-11	108	5-11	E.G.	17
52	7-11	108	16	7-0	91	26	7-3	93	7-4	R.B.	17
12	4-11	86	9	5-3	87	18	4-7	72	5-9	R.B.	18

MEASUREMENT OF RELATIONSHIP BY "SPEARMAN'S RANK METHOD"

– Table 10 - continued –

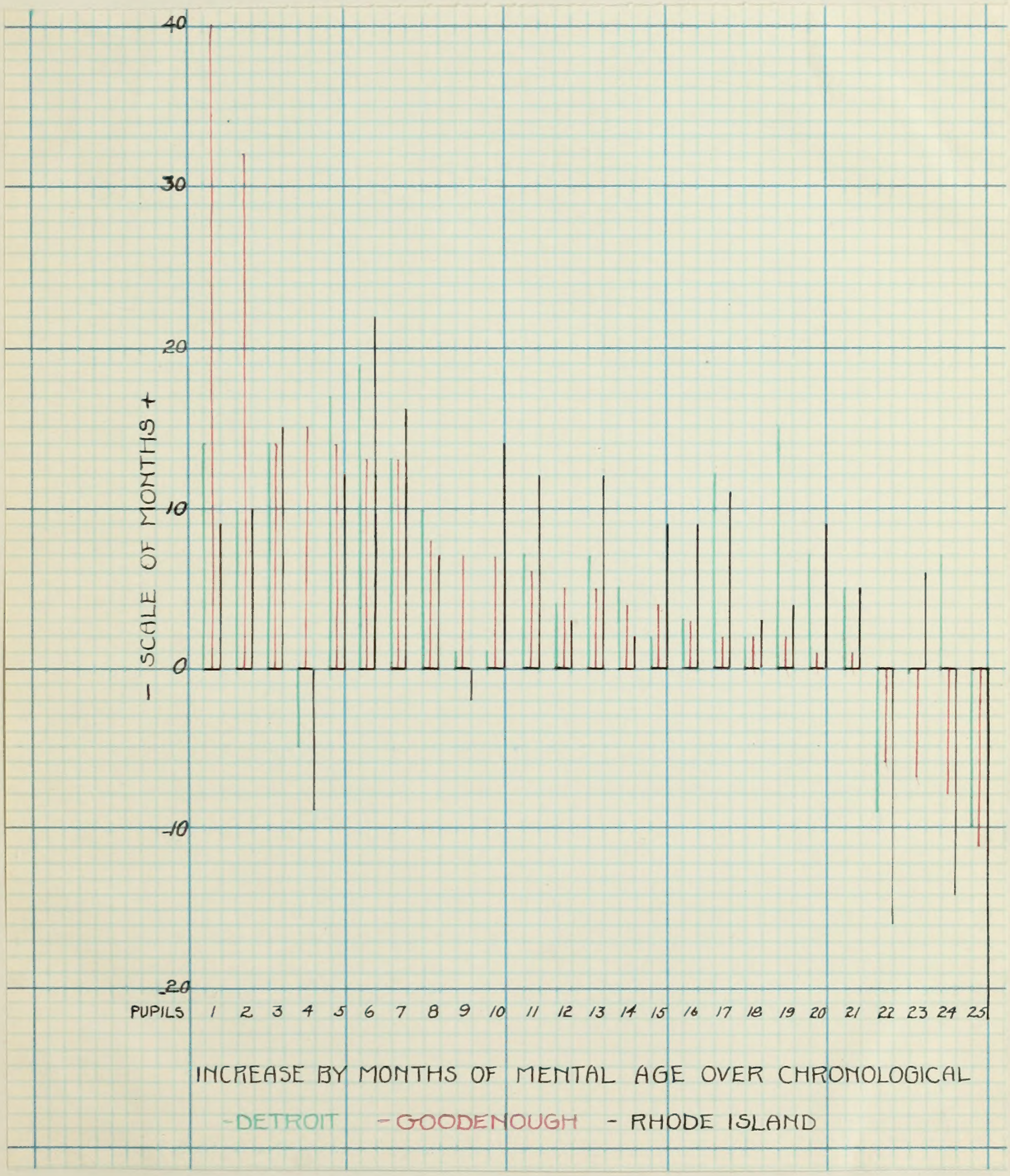
School A
1928 - 1929.

RANK IN			CORRELATIONS						CHRON. AGE Oct 1928	NAME	RANK
D	G	R.I.	G & D		G.& R.I.		D. & R.I.				
4	1	9	-3	9	-8	64	-5	25	6-0	G.J	1
6	2	9	-4	16	-7	49	-3	9	5-11	B.W.	2
3	3	3	0	0	0	0	0	0	5-2	B.G.	3
16	4	16	-12	144	-12	144	0	0	5-10	A.D.	4
2	4	7	2	4	- 3	9	-5	25	5-5	C.S.	4
1	5	1	4	16	4	16	0	0	5-3	Lr.T.	5
4	5	14	1	1	-9	81	-10	100	6-0	G.R.	5
5	6	2	1	1	4	16	3	9	5-2	R.A.	6
14	7	4	-7	49	3	9	10	100	5-3	V.A	7
14	7	13	-7	49	-6	36	1	1	5-3	B.C	7
8	8	5	0	0	3	9	3	9	5-1	A.C.	8
8	9	6	1	1	3	9	2	4	5-2	A.M.	9
11	9	12	-2	4	-3	9	-1	1	5-5	R.L.	9
9	10	12	1	1	-2	4	-3	9	5-3	L.T.	10
13	11	9	-2	4	2	4	4	16	6-0	G.R.	11
12	12	9	0	0	3	9	3	9	5-4	P.C.	12
7	13	8	6	36	5	25	-1	1	6-2	C.B	13
13	13	11	0	0	2	4	2	4	5-2	F.D	13
4	14	11	10	10	3	9	-7	49	6-5	R.R	14
7	14	8	7	49	6	36	-1	1	5-0	A.K	14
10	15	10	5	25	5	25	0	0	6-0	J.P.	15
16	16	17	0	0	-1	1	-1	1	7-1	F.L.	16
9	17	15	8	64	2	4	-6	36	5-11	E.G.	17
15	17	10	2	4	7	49	5	25	7-4	R.B.	17
17	18	18	1	1	0	0	-1	1	5-9	R.B.	18

School A

INTELLIGENCE TESTS - 1928 - '29

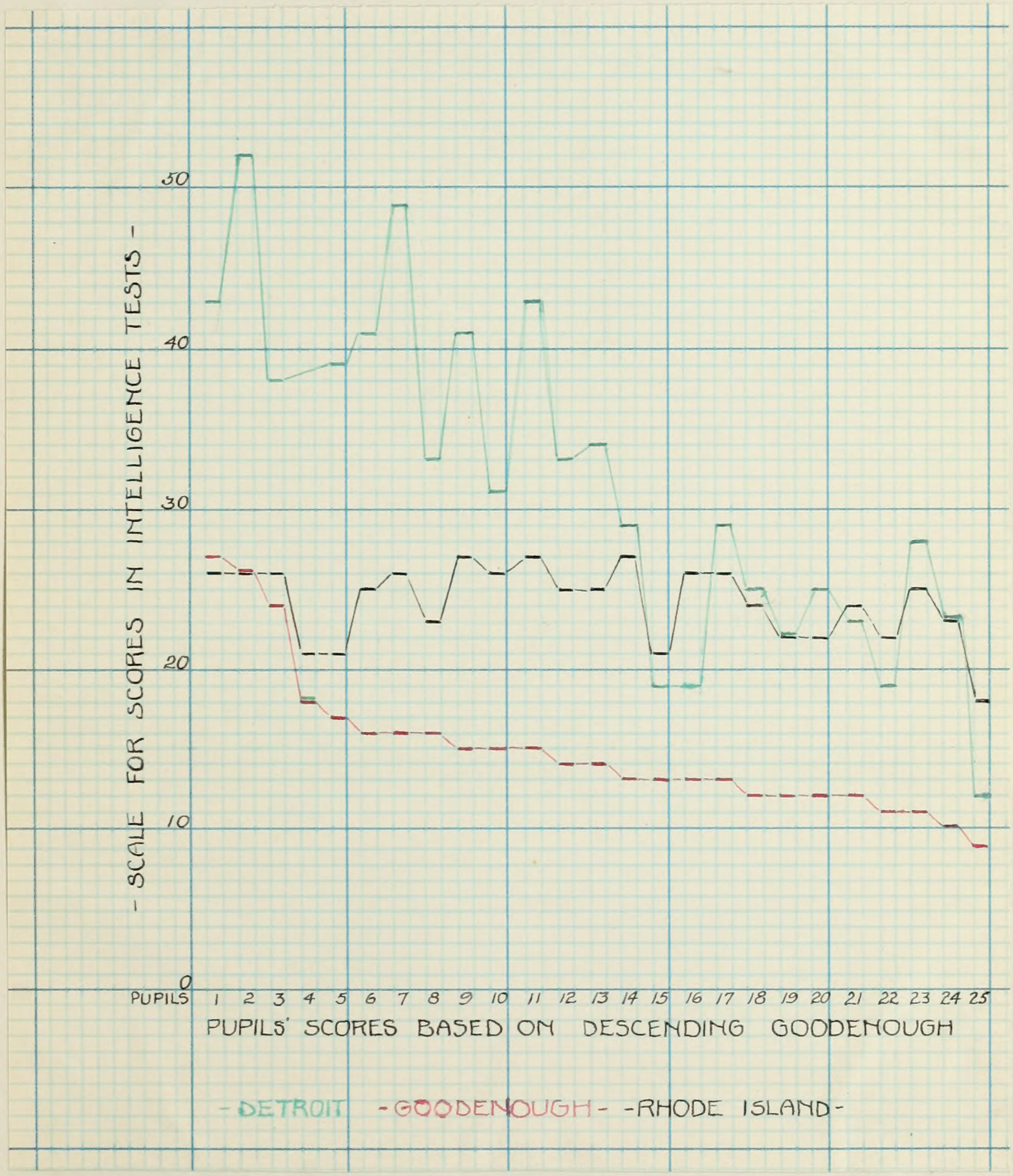
- Graph I -



School A

INTELLIGENCE TESTS - 1928-29.

- Graph 2 -



School B

MEASUREMENTS OF INTELLIGENCE

-Table II-

PRESSEY			GOODENOUGH			RHODE ISLAND			CHRON. AGE	NAME	RANK IN GOODENO
SCORE	MENTAL AGE	I.Q.	SCORE	MENTAL AGE	I.Q.	SCORE	MENTAL AGE	I.Q.			
38	Y M 6-9	119	18	7-6	130	21	5-7	100	5-3	H.M.	1
55	8-6	152	17	7-3	128	23	6-3	112	5-2	F.T	2
52	8-0	140	16	7-0	127	22	5-11	104	5-4	W.K	3
37	6-8	121	14	6-6	124	19	4-11	90	5-1	J.M	4
47	7-6	113	20	8-0	123	24	6-7	99	6-4	D.T	5
40	6-11	117	16	7-0	122	16	3-9	65	5-7	P.F	6
38	6-9	127	13	6-3	120	13	2-3	45	5-0	R.C	7
25	5-8	105	13	6-3	119	24	6-7	121	5-1	D.H.	8
35	6-6	111	15	6-9	119	16	3-9	67	5-6	D.M.	8
57	8-7	149	16	7-0	118	25	6-11	120	5-5	S.B.	9
52	8-0	141	14	6-6	118	24	6-7	116	5-3	R.P.	9
51	8-0	135	14	6-6	113	24	6-7	111	5-7	L.T.	10
27	5-11	98	14	6-6	111	21	5-7	93	5-8	M.B	11
18	5-2	90	12	6-0	107	13	2-3	41	5-5	R.L	12
33	6-4	107	12	6-0	104	23	6-3	106	5-7	V.L	13
56	8-6	144	12	6-0	104	25	6-11	117	5-7	G.T.	13
24	5-8	93	12	6-0	101	23	6-3	103	5-9	M.L.	14
36	6-7	108	11	5-9	97	20	5-3	86	5-9	A.G.	15
1	—	—	11	5-9	97	8	1-	—	5-6	M.W	15
61	9-6	148	12	6-0	96	26	7-3	113	6-1	P.C	16
7	4-4	80	8	5-0	96	9	1		5-1	R.L	16
54	8-3	150	7	4-9	89	24	6-7	120	5-2	A.L	17
39	6-10	105	10	5-6	83	21	5-7	82	6-2	D.Mc	18
0	—	—	7	4-9	78	13	2-3	38	5-11	P.M	19
29	6-1	87	7	4-9	70	11	1—	—	6-8	C.L	20

RELATION OF INTELLIGENCE
TO
DRAWING ABILITY

As to the relation of intelligence to drawing ability, no numerical value has been determined. The Goodenough Intelligence Test thruout this study proves to be as consistent in determining intelligence, other than special ability, as any of the other tests given. For example, the following are results of five tests given within a year:

	Detroit -	Rhode I -	Pintner C. -	Stanford R. -	Goodenough
G.J	119	113	124	136	153 - 138
L.T.	133	133	144	123	119 - 123
R.R	119	106	128	110	102 -
E.G	100	108	104	93	91 - 94
R.B.	108	93	99	95	91 - 90

Thruout, the Goodenough correlates more closely with the Stanford individual test than does any of the others. Then since the Stanford test is considered a most reliable test, it may be fair to count the Goodenough test reliable to quite an appreciable extent for both measurement of intelligence, and drawing ability of a certain type.

Further, our interpretations of talent and drawing ability need standardizing. Some may consider good motor control, and observation the chief requisites for display of drawing ability, whereas, a sketchy, crude, imaginative drawing may be the product of an alert mind, not over-anxious about technique.

HOME INTERESTS
AND
ENVIRONMENT

Visits

"Little Blue Books"

Illustration of answers -

Tabulation showing variations

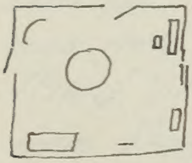
VISITS

As stated elsewhere, as soon as acquaintance and friendship - one meant the other - were well established with the children, the home visits were begun. Over seventy homes were visited, for some children had to be replaced, extras were carried along for fear of a diminishing group, and fifteen other grade one children were studied, who could not be included here

These visits were very interesting. In a few cases the parent looked askance upon seeing a stranger at the door, but doubts were soon set aside when the visitor's interest was known. One little boy said to his daddy, "Let her in quick, daddy! She's the nicest lady." This remark is given to show the reciprocal feeling of rapport which we enjoyed.

In a little book called "Home Visits" a sort of diary was kept of each experience. This was done that the experiences might be separated by references to the book. Usually a diagram of the room was drawn, with furniture placement. as a memory aid to home environment.

The following excerpt will give some idea of the type of diary kept:



"Sister came to the door. Ushered into a neat small living room. Mother came in, but Yvonne had to be interpreter. Baby came in, sprightly and smiling, and sat by Noella who had clasped my hand_"

HOME INTERESTS AND ENVIRONMENT

This information is found in the "Little Blue Book". The first page gives and asks the following information:

Name- J— G—. Address- 18 C — S-
Father- John J Occupation- Typist.

1. What older brothers or sisters has she? (or he) If in school, what age and grade?
2. What especial lines of art are some relatives interested in?
3. Does she draw at home? What?
4. What are her favorite toys?
5. What collection of treasures has she?
6. What does she like to make, examine, take apart, or tinker with?
7. What games does she like best?
8. Does she dramatize or imitate?
9. Does she make up stories, or tell dreams?
10. Do you tell stories, or sing, or draw for her?
11. What places of interest has she visited?
12. Any other traits of interest?

The above formed the basis of a friendly call at the home, after a friendship with the child was well on the way. The book was left- to be filled at the parents convenience. The father were frequently interested; and several of the books were signed by them.

THE LITTLE BLUE BOOK

Name- R-P. Address- 24 G— St.
Father- Omer Occupation- shoe cutter.

1. No older brothers or sisters.

2. One aunt interested in singing. Others- common workers- except one boss printer and another an electrician.

3. Loves to draw on blackboard and papers, boats, houses, and makes efforts at copying pictures from roll of blackboard. Loves to write alphabet and numbers.

4. Plays mostly with building blocks, building houses and garages, also bridges. Likes small toys better than large ones. Has a variety of small machines and cars. When not building he is making puzzles or coloring or reading.

5. Keeps a special drawer for treasures. Has kept all his drawings since Kindergarten, also all he makes at home. Keeps all cards and valentines he has ever received. Collects books, empty boxes, nails, pulleys, string, all kinds of pieces of wood suitable to build with. Loves to go junking in the cellar.

6. Loves to wind toys and watch the result of springs. Generally has small firetrucks or something on wheels in his hands. Loves to cut out pictures,

and try to make objects out of paper.

7. Likes to play in the house.-So long as he can have chairs to make boats, trains and build bridges he is satisfied. Is interested in all boxed games. Has quite a time using smooth board for hill or slide. Outofdoors is always building tents out of old rugs and playing Boy Scout. Loves to climb and tries to do tricks. Digging and transporting dirt one of his favorite. Always liked to play house with other children or else play school.

8. Rather bashful in company but loves to recite and sing all he knows to father and mother. Will imitate different things seen done such as being mailman, peddler, or else working on boats, painting.

9. Tells stories to brother three years old. Some haven't any sense, but it shows he tries hard.

10. Either father or mother tells one or more stories every day. He could listen for an hour at a time. Yes. We sing mostly Mother Goose songs.

11. Has visited Franklin Park, Roger Williams Park in Providence, and Salem Willows. Crazy over the animals at park and certainly can ask questions - which I always do my best to answer correctly. Loves to feed the pigeons and squirrels. There is a special outdoor place in Providence for monkeys and bears. He spent half days watching the monkeys doing tricks, and feeding the bears.

12. Always chooses older boys for companions. Sort of neglects brother because he finds him too slow to comprehend his desires. Likes to have older people teach him to do things. Very willing to help. Can set table, wash dishes real satisfactory, and run errands. Has a strong will power and tries to get by with everything but is very obedient.

Note — Further examples from the "Little Blue Books" will be found under "Individual Studies" in both copies of this study.

School A

HOME INTERESTS AND EXPERIENCES FROM "THE LITTLE BLUE BOOK"

-Table 12-

NUMBER	Older BROTHERS and SISTERS		ART IN THE FAMILY	HOME DRAWING	FAVORITE TOYS	COLLECTION OF TREASURES	MAKE TINKER EXAMINE	FAVORITE GAMES	DRAMATIZE OR IMITATE	MAKE UP STORIES DREAMS	SOMEONE TELL STORIES SING - OR DRAW	PLACES VISITED	TRAITS OF INTEREST
1	0	0	some	draws - paints	doll and carriage rides a bicycle	doll clothes paper hats	puzzles - sews wants no help	ball - tag - hide and seek cut out paper dolls	Imitates talking and band leader	yes, little stories tells dreams often	Sings with mother bedtime stories We draw for her	Old Fairbank's house, Dedham	Loves to go on long walks Likes to help.
2	0	2	aunts embroider	very little	dolls	nothing special	makes doll clothes	all outdoor games	imitates dancing or speaking	makes up stories	sister reads mother sings	Zoo - Franklin Park So. Boston Aquarium	Cuts and colors pictures
3	2	1	family musical mother piano brothers, violin, cello	all that she draws at school	no preferences	treasures old toys	cuts out pictures	plays seasonal games	seems to have natural ability	no, but dreams about matters which impress	we draw for her	summers on Maine farm, seashore and trips to Boston.	Has gift for concentration affectionate, amenable to reasoning, piano trials harmonious
4	0	0	none except skill in dressmaking	draws with chalk, pencil, crayon	dolls and paper dolls	not acquisitive	prefers mental to physical activity	sedentary games puzzles, paper dolls	no	with depth and continuity	mother Tells real stories.	travelled much by auto and train to beaches, stores, and circus.	very reticent, exceptionally sensitive, proud of school!
5	0	2	father - builder mother - dresses cousin - cartoonist	yes - animals scenes	dolls and colored crayons	doll house and furniture - cutouts and drawings.	doll clothes	singing games playing ball	a great deal	yes, and tells peculiar dreams	yes	Franklin Park - Boston Old Orchard - Maine	Likes pencil and paper
6	1	1	(Sister of No. 22)	has no crayons draws sometimes with pencil.	doll - paper animals to draw around.	keeps dolly in box saves paper dolls, agates, school papers	likes to make paper dolls	Farmer in the dell plays mother and school	likes plays at school - does not imitate	Sometimes - out of a book.	Sing in Italian and Italian stories. radio	Went to hospital for operation Movies once	Likes flowers best of all. Very quiet.
7	0	3	scene painter	yes	doll and carriage	pictures - valentines various toys	anything that has a movement	Sambo, ball, marbles	yes	no.		yes	Enjoys scenery, waterfalls riding thru woodlands.
8	0	0	Some relatives interested in drawing & painting	draws, colors paints much when indoors	no especial interest in toys	School supplies, as, boxes for pencils paints, books - writing materials	not noticable	playing school	tries to imitate everything	no - only repeats	Tells stories	Has not visited much	Loves piano and flowers
9	0	1	father studied hotel structure	loves to draw flowers - houses bunnies	toy dog - teddy bear, paper dolls	stones, glass, lace, ribbon, cards	puzzles, original dresses for paper dolls	circle games - cards - "Old Maid", etc -	delights in make believe	makes up jingles vivid imagination	stories of toys and animals We sing	Minneapolis, Bolling Field Washington, D.C.	Mothers little children. Gets very impatient with those own age. Unusual appreciation of color.
10	2	1	father - house painter aunt paints and writes poetry - cousin has gift shop.	uses color, draws what is learned at school	dolls and doll carriage playhouse.	In drawer saves shells, pebbles and doll clothes	cuts out, sews, and makes doll clothes.	jump rope - ball	recites and sings in front of mirror when alone.	tells dreams	loves to be read to.	Mts - Maine, N.H., New York circus - ballgames - NOT movies	Sweeps for housekeeping. Remembers what elders forget. impatient.
11	4	6	aunts embroider one teaches.	a lot - has roll of paper - draws houses & men	likes books, but pencil and pad better	saves cutouts in box.	makes own paste for cut out books	out-of-doors - marbles plays school - finds in books what to eat and wear.	imitates like a monkey.	makes up stories no dreams	yes, father, mother aunts children	Franklin Park - Aquarium Spot Pond - New Hampshire.	Takes book, pad and pencil to bed. Shows fearlessness.
12	0	0	cousin draws	best of crayons houses - scenery.	dolls	books	no	store - play money	plays lady	no	We read to her	Benson's Animal Farm Mohawk Trail - White Mts -	Very fond of animals
13	0	0	father studied for landscape architect	houses - flowers	dolls - books	baby clothes books -	puzzles	plays school	plays teacher even at meals	a great deal	bedtime stories father and G'father draw -	Franklin Park - Hood's Farm Canada	
14	0	0	father handy with tools	a lot - anything has small blk board	doll (wants a carriage) building blocks	saves poem and reading books	likes to watch and do the same thing.	marbles - jump rope	dresses up plays mother	makes up funny stories, remembers dreams	Father tells French stories and sings songs	Forest River Park	Likes to make things tidy
15	3	0	drawing	yes		cut out pictures		out-of-door games	imitates				
16	0	1	uncle an artist in oils - some water-color	yes, crayons the funny part of daily papers, watercolor magazine pictures	picture puzzles blocks, mosaics, printing outfits coloring set - clay		makes own paper dolls - dresses, hats colors them - makes houses and yards	parade with celluloid animals - picture puzzles London bridge.	puts on show in living room - draws curtain - and ushers in audience	makes up stories of adventure with some moral	stories of our childhood - read "Bookshelf Stories" How Toys Are Made	Peabody Museum - Arboretum Sportsmans, flower & horticulture shows. Topsfield fair, parades hikes	Mirror writer. Poor looser Lacks stability and initiative Sees funny side. Likes a crowd. Mixes well.
17	1	2	cartoonist - signpainter G'ma - dressmaking crochet	draws houses, sky, grass, but writes most	dolls - but rather read or write	pencil and book are hidden from others	no	plays much with twin. They ask others to join if needed.	yes. the group	makes believe reading - makes up as she goes.	older children do	Boston, Narrow Gauge, ferry autumn auto ride, bathing	Twins like music and sing.
18	1	2	(Twin of No. 17)	draws most with pencil, - girls, houses brownies - NOT animals	dolls which she dresses and decorates	six children have two boxes for treasures	not noticeably	circle games	plays school and mother	Yes, and says "How my story's end."	older children read, sing, tell stories.	Same as twin	Humorous - mirror writer speech not clear
19	0	0	father signpainter	many painting books	puzzles - books	saves in big box drawings, poems headbands	makes storybooks	plays school	repeats rhymes and stories.	no.	yes. very attentive.	Maine, New Hampshire Boston, Peabody Museum	Leader of Kindergarten band Very ambitious.
20	0	0	father's hobby is entomology - mother's people artists.	draws many houses and people	trains fire engine	music box - train of cars toy auto.	erector set puzzles	Pollyanna - Indoor croquet	no.	Tell dreams but seems to be making up as he goes.	likes animal stories best. We sing.	Peabody Museum, White Mts Mohawk Trail.	Likes to make scrap picture books
21	1	2	older sister good at drawing. He plays the banjo very well.	always drawing something at home people, autos, houses airplanes, boats, etc	auto, airplane boat, steam engine tops - marbles	Chest of carpenter tools, toy airplanes things he makes	makes, engines, boats autos, airplanes, guns Takes things apart	football - basket ball tops, marbles, checkers	always imitating something or someone	Very fond of telling stories, - can make up most any kind.	He is all attention Loves to have me sing to him.		
22	1	2	father decorates walls of home	none.	toys get broken	string of curious toys from G'ma in Italy	Likes to do as father does	school games	none	yes. - lots	Loves to sing	To movies twice.	Tries cornet - dances. likes animals.
23	1	3	mother makes rugs and quilts	houses, trees, birds	cart, steamshovel bakery truck	box in drawer school papers marbles.	makes doll tables examines & takes apart toy auto	parchesi	takes part in home plays	no.	Many evenings mother draws and shows how to crayon.	Engine room of S.S. Northland where two uncles work Franklin Park	none.
24	0	0	none	yes, but not deciferable	anything that goes or makes a noise	toy box holds nails broken auto parts crayons, pencil stubs	latest effort model of Graf Zeppelin Overhauls toy autos	football	no.	no.	yes	Franklin Park, beaches on No. Shore, to Hampton, N.H.	Wants to be a Master Mechanic like Uncle Joe
25	0	0	aunt and greataunt fine needlework and crochet. Uncle's bus. metal weather strips	not much - does n't seem to care for it. I never that much about drawing.	electric train and any toy that will keep moving erector set	nuts - stones shiny nickel pipe old keys	makes airplanes & boats from wood Takes apart any - thing	marbles or any game. Can play a pretty good game of bridge. not keep score.	yes. very much imitates clowns and grown up	yes, but not the dreamy kind. Not always tells truth.	Read for him He sings school songs Criticised my drawing	Saw N.Y. boat come thru Cape Cod Canal at night - all lights on. Franklin Park.	Good sense of direction. Anxious to say the right thing. Certainly likes to converse.

School B

HOME INTERESTS AND EXPERIENCES FROM "THE LITTLE BLUE BOOK"

-Table 13-

NUMB'R	OLDER BROTHERS OR SISTERS		ART IN THE FAMILY	HOME DRAWING	FAVORITE TOYS	COLLECTION OF TREASURES	MAKE TINKER EXAMINE	FAVORITE GAMES	DRAMATIZE IMITATE	MAKE UP STORIES TELL DREAMS	SOME ONE TELLS STORIES SINGS-DRAWS	PLACES VISITED	OTHER TRAITS OF INTEREST
1	0	0	father signpainter mother sews for family	yes, with crayons and black board	books real duck doll & furniture	valentines, doll clothes, drawings in box-	never takes apart but examines things	sled, swing, ball skip rope, sail a boat	makes believe she is sandman or lady	makes up stories tells dreams	French stories and songs - show her how to draw	The Willows - Church Nativity Canada when 3. farms. Never to movies	washes dishes - dusts - tends baby like a mother - runs errands - roller skates - likes piano
2	2	1	sister only - is interested in music	more in winter when indoors - anything in mind	doll & carriage	keeps treasures in 3 drawers of little dresser father made saves school papers.	she sews	spends much time painting and drawing on blackboard indoors - likes her story books	too self conscious to dramatize or imitate -	does not tell stories or dreams noticeably	mother tells stories quite often - and sings and draws with her	Franklin Park, most of the beaches on the North Shore	Likes to sit at the piano and play ? and sing for self
3	5	1	none	spends much time at No 7's house. painting & drawing	dolls or trucks with small brother	treasures her toys in closet or drawer	likes to examine makes things of wood	circle games	somewhat	makes up stories tells dreams	Sundays and rainy days has shows plays parties - Sing - tell stories	Spent summer on farm in Canada Franklin Park - Revere Beach	Enjoys everything
4	3	1	father draws for pleasure. Drew Sacred Heart for St. W. Sisters	blackboard, but mostly letters and numbers	doll - carriage - crib high chairs.	none	tries to make doll clothes - paper dolls	circle games	with playmates Jack and Beanstalk Little Red Riding Hood	No, but tells dreams.	father sings & draws children tell each other stories.	Forest River Park - The Willows No movies	Likes bathing, longs to wear high-heeled shoes, helps.
5	1	0	Cousin teaches art in Boston Schools - An uncle is gifted	only tries houses, crayons delicately, is partial to pale green-	dolls, books, and blackboard, usually writes or does arithmetic	dolls, carriage and basinette. Old record as "Pretty Maid!"	makes doll clothes very careful and systematic	dolls - dancing	loves dancing when alone. Converses with imaginary person.	entertains friends by reading, makes up stories.	someone sings occasionally. She cries when she hears a sad song or story	Aquarium	She loves beauty and pretty things. Sings all day long. Loves birds and flowers.
6	0	0	none except a prize window decorator	seldom draws but colors, vision poor.	dolls	treasures her own table and chairs desk, books, dolls, etc	never destroys toys wants things "just so"	keeping house and doing things mother does.	keen on imitating - even different tones of teacher	does not make up but reproduces truthfully	tell stories for her to repeat. Gets good radio music, especially piano.	Travelled much of New Eng. in car Old Man of the Mountain, Mount Monadnock, Roger William Park etc	Strong will - minds to please Very affectionate. Injured at birth - (nerves)
7	0	1	father teaches manual training	draws a lot everything in general, has a blackboard.	enjoys blackboard more than any other toys.	none except Toys	no	cuts out dolls and pictures from Sunday supplements	tries to copy every body and everything	talks a lot but does not say much.	very seldom	Various places in New Eng by auto	Normal - not unusual except that she is vain and talks a lot.
8	11	2	Beauty Parlors in home mother artistic married sister paints as a pastime.	often - cat - doll carriage snowman	baby dolls, dishes crib, carriage, cooking set, bicycle	keeps toys in drawer calls them her treasures	has crayon books Cuts paper dolls	likes best to play mother	likes to imitate more than dramatize	at night always has a funny story to tell, dreams told in morn.	mostly on rainy days - we draw for her to color	Been to various beaches and enjoys swimming.	Very different from others, reads much, goes errands
9	2	2	one relative does fancy needlework	draws, fruit, people, trees houses	four dolls and carriage	postal cards	pokes doll's eyes out to see inside	indoors - mother and school - outdoors - all school games.	"Three Bears" "Traveller & Bears"	yes	yes	Rockport, Winchester, Gloucester Boston, Public Gardens, circus	Likes sewing, keeping house, sliding and drawing.
10	1	6	a few relatives wagon designers	sometimes draws boats with chalk	autos - boats	not much, but a few machines, set of blocks - two broken boats	with knife tries to make boat or airplane builds houses of blocks.	His favorite pastime is to take apart whatever he can, likes any game a gun goes with	likes to imitate better than dramatize	Every night in bed he makes up stories that never did or could happen	I generally draw or tell stories for him	Never visited places of much interest yet.	
11													
12	0	0	none	likes to draw houses.	books, games, tools	most anything he puts away in his desk.	likes to take apart everything to see how it is made.	cowboy, Indian, baseball	likes to sing	not now, but when younger	read stories and often sing for him	museum	Everything interests him very much.
13	0	0	cousin is an architect	a great deal birds and animals	airplanes, bicycle machines	hobby of collecting beautiful pictures	toy airplanes	tag, hide-go-seek, giant steps, tiddle-de-winks - old maid -	dramatizes stories which he knows	many stories	mother tells him stories at lunch and bed time.	Franklin Park, Essex Institute Peabody Museum	Loves out-of-doors - Enjoys school and reading, has many friends companionable.
14	0	0	none known	always drawing, and tracing, and coloring stencils	trucks of all kinds, electric train, blocks	old cans, broken marbles, hammers of all sizes.	always thinks of something to build with father's tools and lumber	dominoes, marbles base ball	somewhat	not many	radio story hour stories read often	Spends summers Pool R. N. Y. going by boat, train, auto. Visits New Hampshire, Maine	
15	0	1	uncle liked to draw	draws animals boats, flowers.	all kinds - especially small automobiles	saves school papers - some small autos	takes things apart	picture puzzles	imitates	makes up stories, but rather listen.	frequently tell stories a boy on each side, draw and sing, too.	Crossed Atlantic twice - walked first on boat going, Stayed a year in Greece - Athens & three other cities	Very generous and a good-hearted boy
16	0	3	sister devoted to piano	yes. mostly animals of all sorts and descriptions	tool chest and its contents -	cherishes a painting set devotedly	houses, garages etc with tool set - Tinkers with mech. toys & clocks	plays traffic officer, making and watering garden, plays checkers, but poor loser.	Likes to act what is being read to him	Lets imagination run Talks of "when he was a man. Dreams of school	mother makes up stories for him, draws persons all sizes which he enjoys	Visited fire dept. house where the purpose of every apparatus was explained.	Highly intell. Indolent - does things to please, laughs away trouble, frank, sympathetic, makes friends easily, make great effort to help older folk.
17	0	2	an uncle was interested when young	does not draw, no crayons.	truck, erector set, cart, electric train	none	takes old telephones apart, wheels off of bicycles	builds from boards, garage to put trucks into.	no	no	never tell stories we sing some have radio	Canada, New Hamp, Bangor, Maine visited on farm there. Circus	Likes to finish things, have the last say but more quiet than brother.
18	0	1	(brother of No 17)	" "	" "	"	"	" " "	"	"	" "	" "	Always starts something
19	1	0	Cousin. Honor. Mention at Museum Sch. Two others make covers for magazines.	a great deal on large black board - with help and suggestions	erector set	old auto number plates, marbles, silver paper, old top, pieces of wire.	examines & tinkers with lots of things recently an old clock	soldier, toss ball, tag	driving a car - darkens playroom to give show	loves to tell dreams about fairies.	yes - sing his school songs and scales with him	Franklin Park Zoo, Peabody Mus. Nantasket ruins, Salisbury Beach Winthrop and several country places	Likes to learn about everything Picks up things quickly, wants to go to Manual Training.
20	1	1	aunt good at sketching and cartoons	very often. - draws from books and papers anything to his fancy	trains and any mechanical toy	keeps in a drawer cut out color pictures of boys, dogs, houses	erector set - calls it a building set, makes bridges, trains, autos ships	Out-of-doors - basket, foot and base ball, marbles. Indoors: lotto, dominoes, checkers tiddle-de-winks	imitates anything seen at pictures or heard over radio	good at making up stories	will sit by the hour to hear stories. We sing and draw for him	Has gone on many auto rides and seen parks of interest.	Likes to go to Essex to see Shipbuilding, tries to imitate.
21	0	0	one uncle boss printer, one an electrician aunt singer.	draws on blackboard copies from " roll. draws boats - houses	likes small toys better than large blocks, machines	in special drawer keeps old drawings cards etc. Goes junking	loves to wind toys and watch result of springs. Likes wheel toys -	makes bridges, boats, trains from Chairs, Boy Scout tents from rugs, digs and transports dirt, climbs, plays house & school with others.	bashful except before father and mother; imitates mail man, peddler, painter, boatm-	makes up stories for little brother	father and mother tells a story every day. sing mostly Mother Goose Songs.	Franklin and Roger Williams Parks. Spends half days watching monkeys and bears. Feeds squirrels and pigeons.	Chooses older boys for companions Likes older people to teach him Strong will but very obedient.
22	1	0	music	boys and girls jumping rope	trains, boats, guns, soldiers	puzzles, blocks	clocks	marbles	yes	yes	yes	Franklin and Roger Williams Parks	He likes to recite and sing
23	3	2	one interested in painting, one in fancy needlework	boats, houses people, fruit	animal toys trucks, fire engine	anything that interests him for playing	takes mechanical toys apart, makes wooden airplanes	imaginative games of cowboys and Indians.	Yes	yes	yes	Rockport, Winchester, Gloucester, Boston Public Gardens.	Interested in airplanes Likes bright colors
24	0	0	great-great-grand father made oils of boats. Uncle & cousin draw	yes, mostly boats and houses, loves to paint and draw in books	fireengines and anything pertaining to fires or firemen	none	likes to make log cabin - etc - with erector set.	football and baseball	likes to imitate	No stories - but tells about dreams sometimes	always ready for me to read him a story before he sleeps.	Franklin Park, White Mts. Cape Cod, Nantasket by boat, Brockton Fair, Pract. everywhere on Mass. coast	Loves to dress in fireman suit. Very generous with toys. Has very good memory, Likes to show his brother how things are done.
25	0	0	father - clothing merchant.	crayons and paints, sometimes, horses dogs, cats! fruit trees	bicycle, sled, rocking horse, machine truck.	in drawer, pencils, pens, paper money	likes to hammer with nails	hide-and-seek, giant stride tag, red light, rattle snake, snap the whip, old lady witch playing mothers	none	doesn't tell dreams	tell him stories until he falls asleep	Likes Hood's Farm to see the cows, sheep, monkeys & toys.	

INDIVIDUAL STUDY

1. Louis T—. } twins. Grade II. School A.
2. Lorraine T—.
3. Rachel C. ——. Grade I. School B.

INDIVIDUAL STUDY

Louise T— .
Lorraine T— . > twins. Age, Oct 1. 1929 — 6 y - 3 m.

Parents - American   Father - shoemaker.
Home - humble - crowded
Grade II - grade I. Kindergarten
Lorraine - righthanded.
Louise - left and mirror writer. (ɘꙅiuo⅃)

ANALYSIS OF DRAWINGS.

Louise -:

Oct. 10.	17 min.	house, furniture, flower, child, sun
Jan. 10.	8 "	house - , flower, child.
Feb. 5.	10 "	house - furniture, flower, child, people.
Feb. 12.	12 "	house - furniture, flower, child.
Feb. 26	15 "	house - furniture, flower, birds.

Lorraine.

Oct. 15	15 min.	house, child, tree
Jan. 3	25 "	house, flowers.
Jan. 27	27 "	house, tree, bird, nest
Mar. 19	13 "	flowers, clouds.
Apr. 15	17 "	house, tree, clouds.

Louise - Imagination 1 point - also Sociability.
All others rated 0-zero
Lorraine - Motor Control - 5 points
Observation - 3 " , also Sequence, Memory and Talent.
Imagination - 1 " , also Reasonings - Self-criticism.

Louise and Lorraine T—— .(continued.)

INTELLIGENCE TESTS.

	Louise I.Q.	Lorraine I.Q
Goodenough	106	119
Rhode Island	104	133
Detroit	108	133
Rank in Goodenough	10	5

THE LITTLE BLUE BOOK

Name - Louise T— . Address - 107 B—— .
Father - Percy. Occupation - Shoe-maker.

1.
Older brothers - one. C— . 5th Grade - 10, Oct. 1929
Older sisters - two - M—, 7th Grade - 11, Aug. 1929
H—. 4th Grade 8, Aug. 1929

2. Cousin who is a sign-painter by trade is quite a cartoonist. Often entertains the children. Grandmother is tasty in dressmaking and crotcheting.

3. Draws at home, mostly with pencil, little girls, houses, brownies. Not animals.

4. Favorite toys are dolls. She dresses and decorates them.

5. For their treasuses there are two big boxes for six of them.

6 She does not examine, make, or tinker with anything noticeably.

7. She likes best singing in a ring games, as "I wrote a letter—."

8. They imitate playing school and mother. They form a singing "quartette".

9. She makes up stories and says, "Now my story's end."

10. Older children read, sing and tell stories together.

11. She has been to Boston by narrow gauge and ferry, and an auto ride coming back in September. Has been to the Park celebration in August for two years. Goes bathing in Forest River Park pool.

12. Humorous. Can make one laugh when others fail. Speech not clear.

Boston University
School of Education
Library

Lorraine - (twin) The same as Louise to Number 3.

3. Draws houses, grass, sky, - but writes mostly.
4 Likes dolls, but would rather read and write.
5. Her treasures are her pencil and book. She hides them.
6. Does not examine, take apart, or make things.
7. Likes games with Louise. If they need them they ask others to join.
8 She dramatizes as does Louise, - with the others.
9. She made believe she was reading when smaller, and made up as she went. Sometimes tells stories from school.
10. As for Louise.
11. She has visited the same places as Louise.
12. Louise and Lorraine both like music and like to sing.

REMARKS.

It will be notices that the conversation of these twins during the taking of "mental content" is not very enlightening. However, it is worthwhile to note this reticence and observe the almost silent drawing process. Where there is "bubbling over" of ideas and enthusiasm there is always someday a burst of confidential conversation. These qualities are plainly lacking in these cases. Though both scored one point in Imagination, the trait is not shown throughout the drawings. Neither child received credit for self-criticism, but Lorraine is quick to grasp an idea and capable in execution. Lorraine's powers of observation and memory evidently bring up the scores for both intelligence and "mental content" as revealed in her drawings. The home is no stimulus for imagination or enthusiasm.

CONVERSATION

1. No. 17. Louise T—. Oct. 10, 1929
Time - 17 min.

*O. "Can you draw a picture for me, Louise?"
C- Nods, "Yes"
Took green crayon and made grass.
O. Do you like to draw?
C. Nods.

Took brown crayon and made house. Drew a window, then drew a little baby in a bed. With black crayon drew chimney and smoke. Then drew table and chairs. Took yellow crayon and after drawing proudly, looked at me and said, — "This is the sun."

She then drew flowers - first orange then red. With brown drew outlines of persons body and fingers, then added eyes, nose and mouth. Green hair.

C. "A girl."

Then made a green boy. This time made face first, then arms and fingers.

Drew sky with bleu crayon right across smoke, sun, and chimney right down to the grass.

C. When asked to tell about picture she said, - "This is a house, a flower, another flower, a girl, a boy, and a moon."

Note - A student teacher made the observation.

*O - observer . C - child

gowdi Oct 10, 1929

CONVERSATION

2. No. 17. Louise T— Jan 10. 1930
Time 2:30 - 2:38

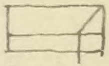
O. "Draw anything you want to, Louise."
Silently got green crayon for grass. She holds crayon rather awkwardly. Tongue out. Puts three rows of windows in house
O. "What is the story of it?"
Stops to think with finger in mouth.
O. "Do you know?"
C. "No." (Breathes hard while drawing.)
O. "What's that?"
C. "Sky." (She puts it under the house.)
O. "What color do you like best. Louise?"
C. "Blue." (She was using blue at the time.)
O. "What do you like to draw best?"
C. "Houses."

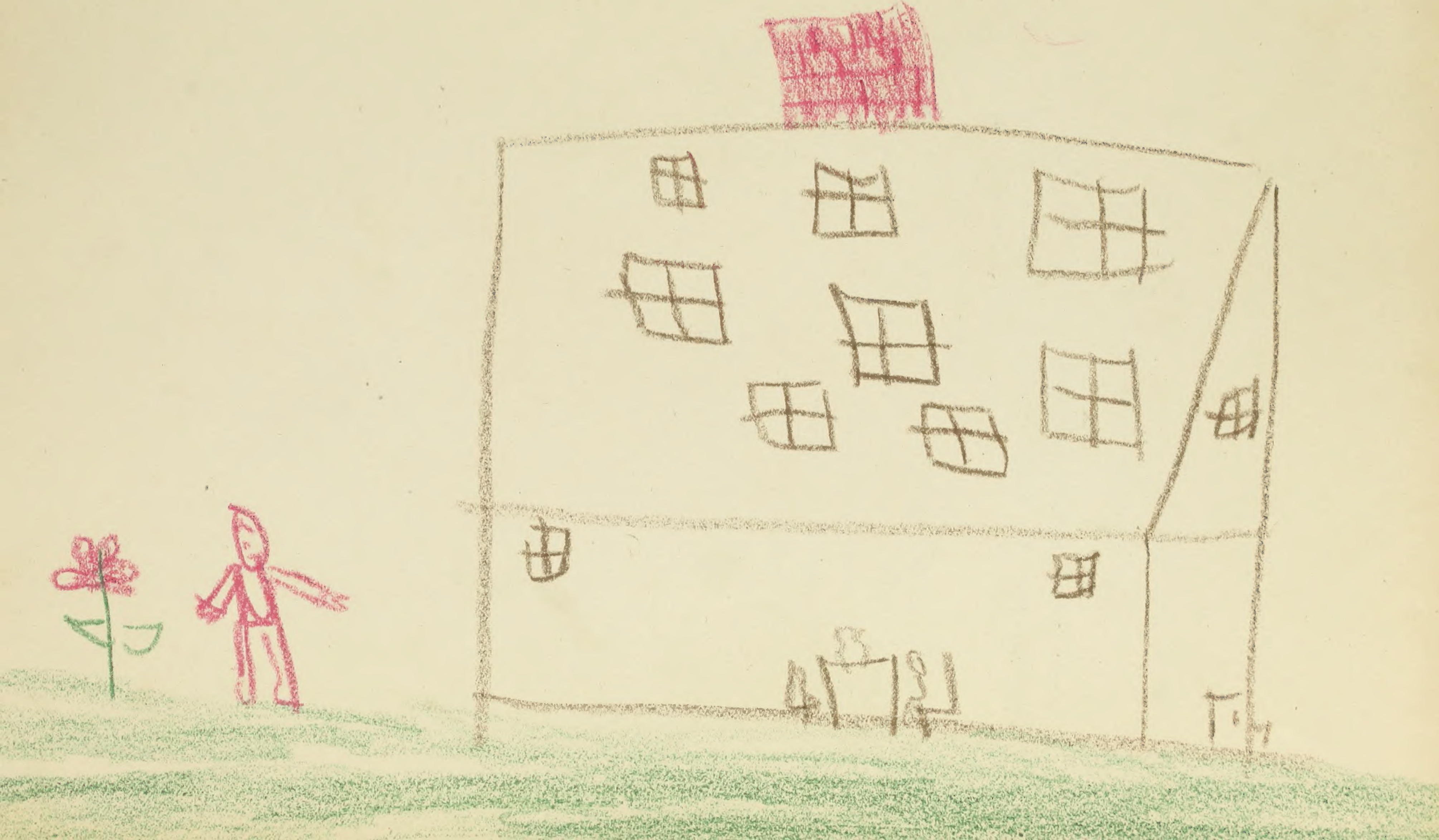
[illegible]
Louise

Louise T——
[illegible] 10

CONVERSATION

3. No. 17. Louise T—. Feb. 5, 1930
Time 10-45-10:55

O. "You were not here last week, Louise?"
C "My other sister is away today. She went to the hospital to see my sister in the eighth grade. She went Sunday. She won't be out for ten days."
Sits thinking.
O. "Do you know what to draw?"
C "Yes." (Makes grass and oblong for house  Makes windows away up in the roof. Draws table and chairs, People sitting at the table. Showed her how to make bricks in the chimney.
O. "Don't you like that?"
C "Yes."
O. "Didn't you ever do it before?"
C "No."
O. "What color do you like best, Louise?"
C "Red." - - Red and Green."
O "What do you like to draw?"
C "A house"
O "What can you draw besides a house?" (No answer)
O "A lot of different things?"
C "Yes." (Sits back as if done)
O. "Where are your windows,- upstairs or down?"
C "Downstairs."
O Do you call that down stairs?
C "Yes.- No."
O "Have you any downstairs?" C. "No"
O. Are there any in your house? C. "Yes"
Takes paper and puts in two small ones.



CONVERSATION

4. No. 17. Louise T—. Feb. 12. 1930

Time 1:50 - 2:02

Draws with left hand. Breathes heavily with open mouth. Draws grass - house - table - chairs - people. "bed" - door. Colors house red.

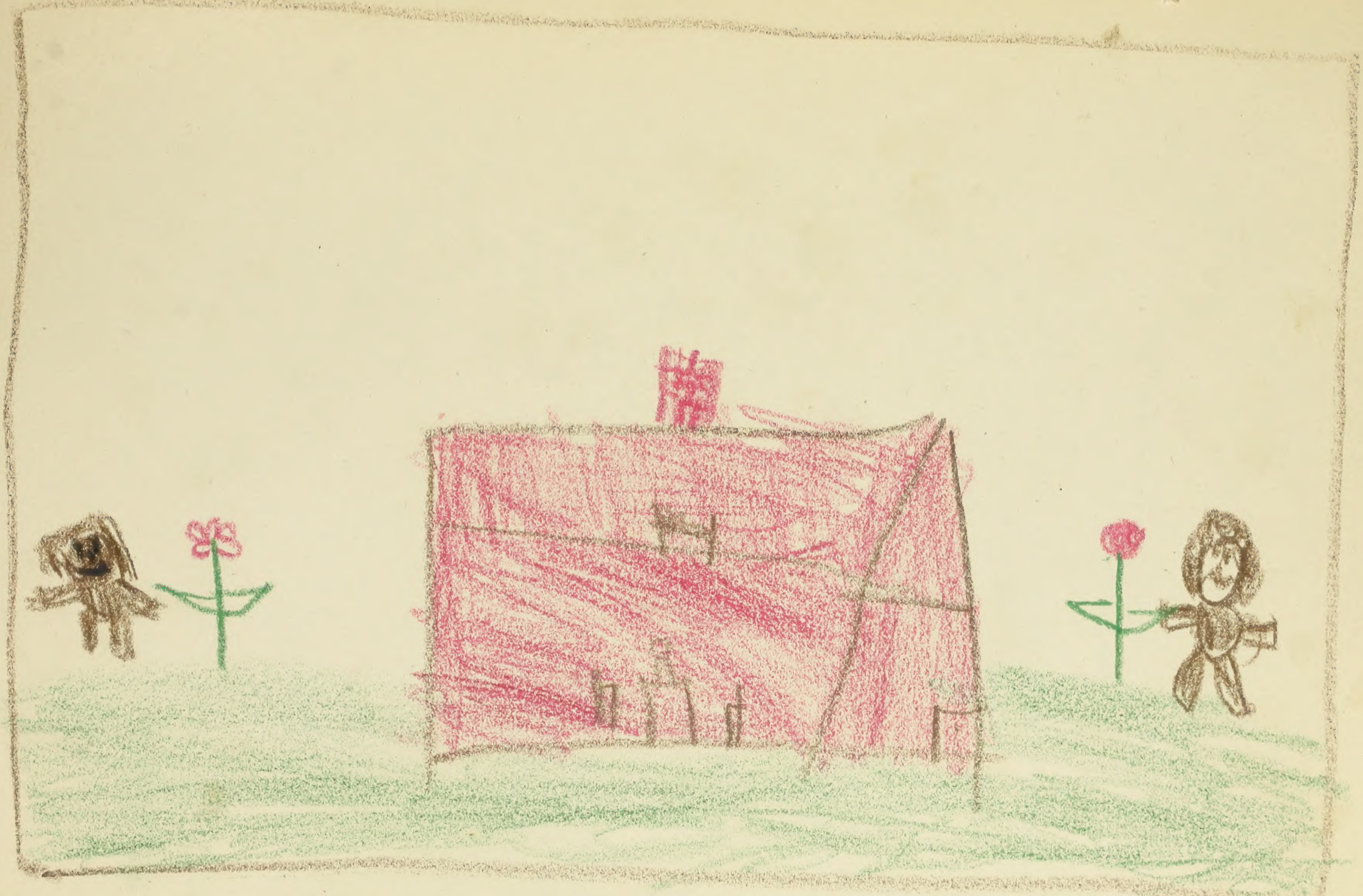
O. "Color a little smoother."

Tonque out. Help needed in technique. Draws flowers, tiny girls. Both girls brown. Adds hair.

C. "I haven't any blue" is the reason she gives for no sky, but makes no comment until questioned.

"What story did you read in your room this morning?"

C. Tried to think. "I forget."



Louise T

CONVERSATION

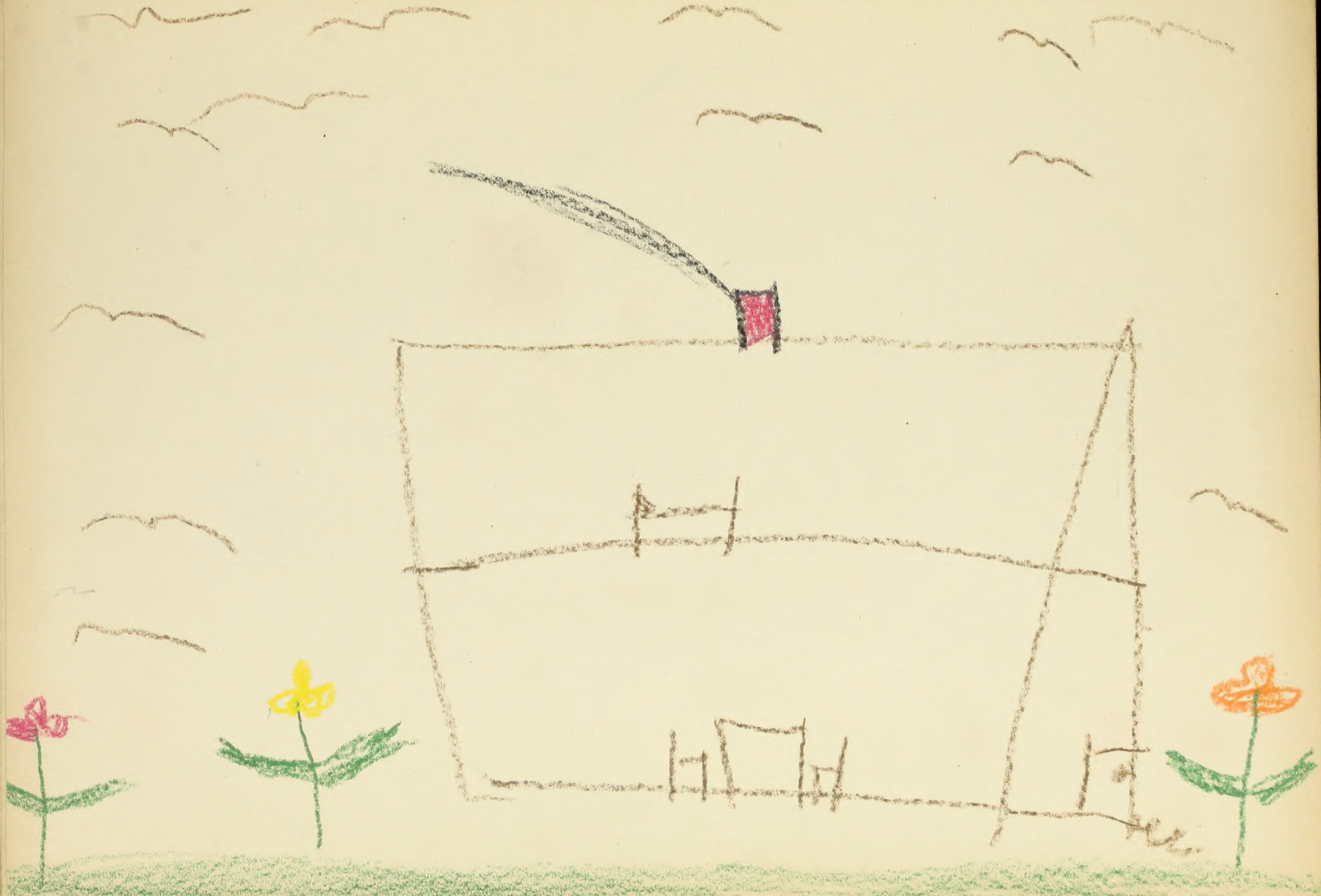
5 No. 7. Louise T— Grade II. Feb. 26 - 1930
Time 1:30 - 1:45

O. "What are you going to draw?" (No answer)
Began to make green lines.
O. "What are you drawing?"
C "Grass."

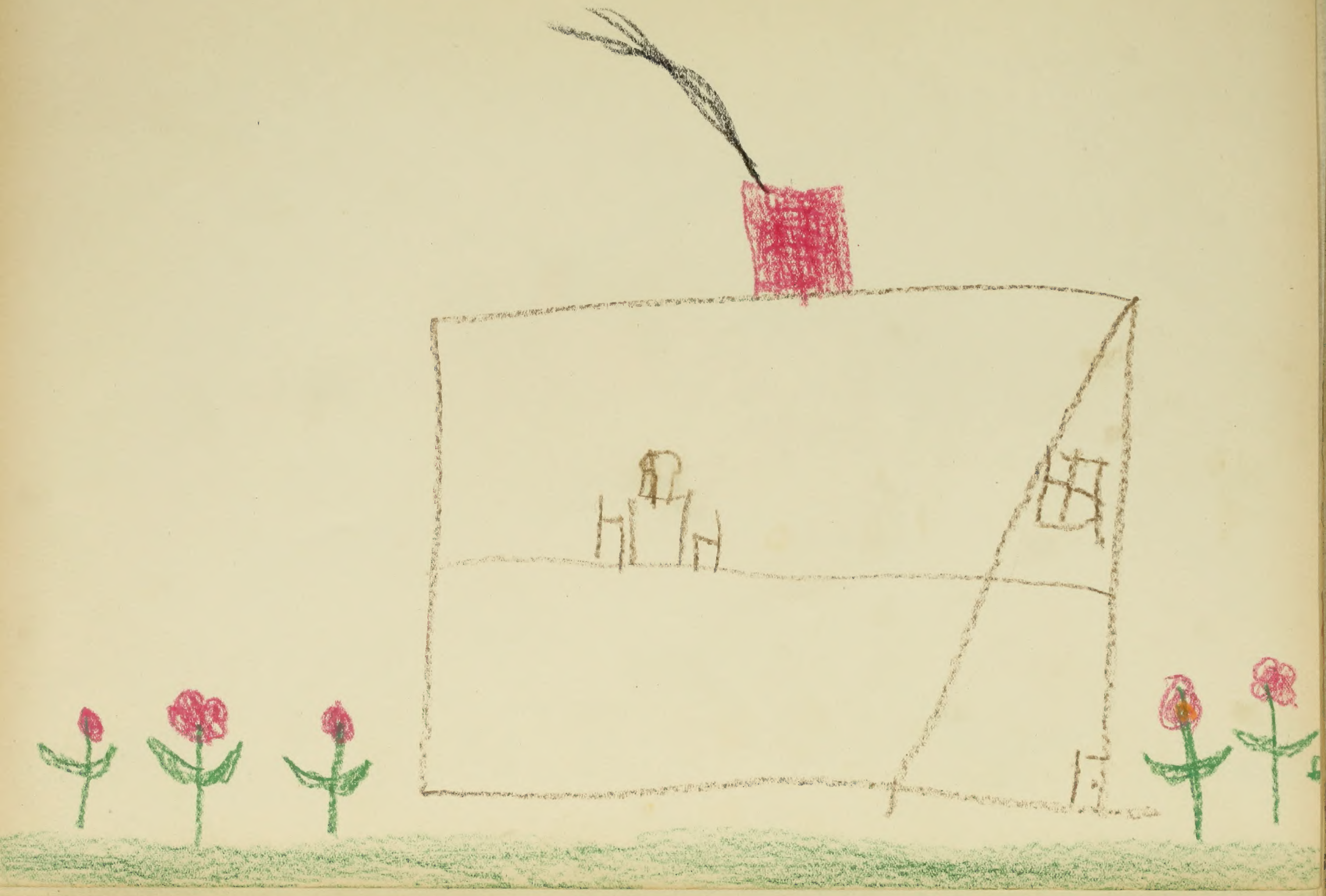
Made a house, table on house, - and little flowers all red. When questioned says she likes to draw. After she made flowers, made chimney on house.

C "There is milk on the table."
O. "Do you want to draw something else."
Answered by turning her paper over. Began another house.
C. "I always draw houses."

Made chimney when she made house this time. Made some birds flying around. She would have colored the sky blue, but she did not have her blue crayon.



Feb 26 - 130 - 1:45



FREE EXPRESSION DRAWINGS

BY

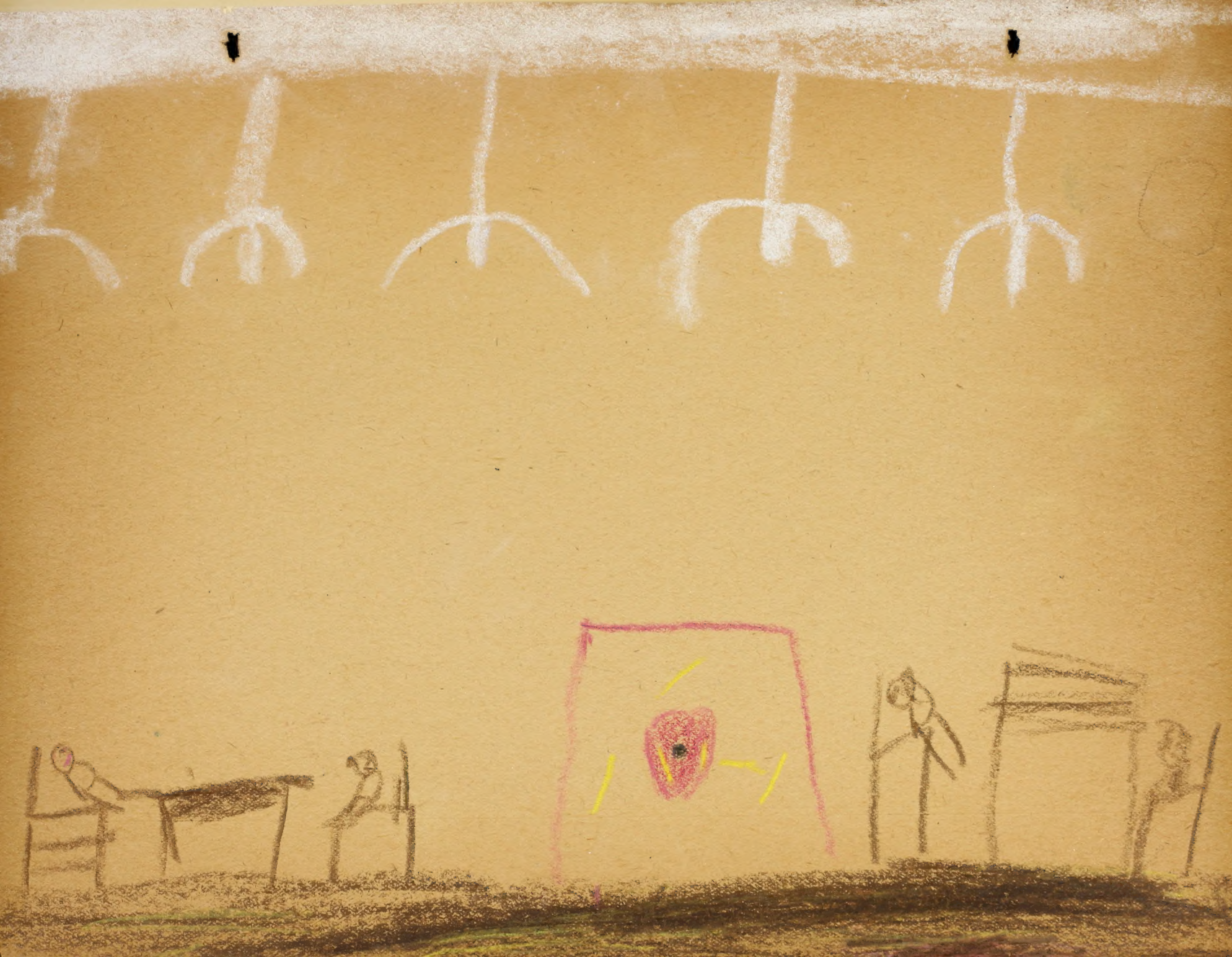
Lorraine T——. Grade I 1928-1929.

No "mental content" for this year was taken. These pictures are given to show if there is any advance in technique during the second year, or any variation of interests and interpretation.

Following these three drawings - the "mental content" and five accompanying pictures are given. These were taken during 1929-1930, while Lorraine was in the second grade.

Lorraine & y

Larraine B T



Lorraine e

LT

CONVERSATION

1 No. 18 Lorraine T—. Grade II - Oct 15, 1929
Time 9:45 - 10:00

O. "Will you make a picture for me?"
Nods.
O. "What kind?"
C. "I don't know." Draws green grass very carefully. Tries to make it even across the paper. Took brown crayon and went over grass. Drew brown trunk.
O. "What is that? - A tree?"
Nods and puts green foliage.
O. "Do you like to draw?
C Happily, - "Yes."

With brown crayon drew roof of house, then frame, then red chimney, then black door, windows and curtains. Next - made her autumn tree.

O. "Will you tell me the story of your picture?"
C. "There is a house, and there is a little girl going into the house. There are two trees. Here are some leaves on the ground."

Note - Observation made by student teacher.

CONVERSATION

2. No. 18 - Lorraine T. Jan 3. 1930

Time 2:45-3:10

O. "What are you going to draw?"

C. "A house".

O. "Is that what you like to draw best of all?"

C Nod, yes. "Shall I draw with this paper?"

O. "Yes."

Puts on green for grass, very carefully but fast.

O. "Who showed you how to make a house like that?"

C. "My sister."

O. "Where?"

C. "She is in the eighth grade."

O. "Does your uncle draw for you?"

C. "Yes"

O. "Does that look like your house?"

C "No."

O. "Do you like to climb a hill?" (Draws grass level)

C "No."

Adds green shutters.

O. "That's pretty. Why do you put shutters?"

C. "Because houses have shutters."

O. "They don't all have do they?"

C. "No"

O. "What color do you like best, Lorraine?"

C. Very quickly - "Red."

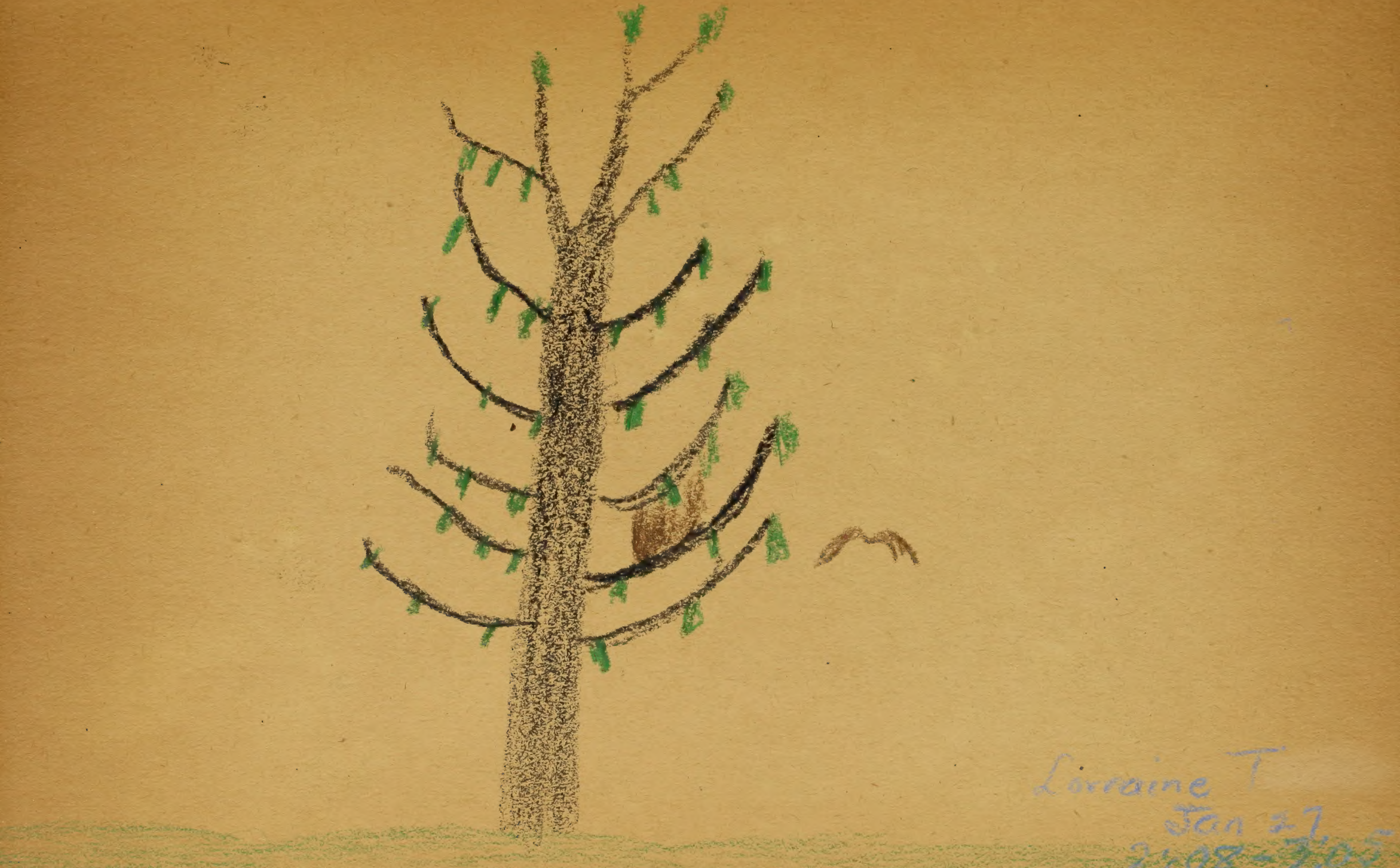
She seems mature, - not childish. Hands very graceful and capable.

Lorraine Thrasher
Jan 3 1930

CONVERSATION

3. No. 18 - Lorraine T- Jan. 27 - 1930
Time 2:38-2:48 - 3:15

C. "I can draw a house for you."
O. "Could you draw something that you never drew before for me?"
Puts hand on chair as if to think.
O. "Did you ever draw a tree with a birds nest in it, and the mother going to get something to eat?"
Began to draw.
O. "What time of the year is this going to be?"
C. "Middle." (Has bare branches)
O. "There are never any little birds when there are no leaves on the tree are there?"
C. "No" Adds leaves.
Showed her how to divide trunk into branches.
O. "Now you draw on the other side, something you would just like to draw yourself."
Quickly puts green for grass, and draws a brown house. Looks out of window as if thinking. Silent.
O. "Is that a new dress you have on, Lorraine?
C. "No. It's my little sister's. She's too little for it."
O. "It looks lovely on you."
Back to work making bricks. Showed her how to "lay" bricks - using scrap paper - as always.
O. "The roof wouldn't be bricks" She began on roof.
Colored in brown. Colored bricks red. Silent.
Puts in windows. silent all the time. Puts in sky carefully.
O. "Why don't you talk?"
C. "I like to draw."



Lorraine T
Jan 27
2'08-7'05

CONVERSATION

4 No 18 - Lorraine T—— Mar. - 19 - 1930
Time - 2:00 - 2:13

O. "Can you draw a picture about some story?" I want you to tell me more about it than you ever did before. You know me real well now, dont you."
C. "Yes." - (Silent five minutes)
O. "You are not talking to me very much are you?"
C. "No" - Softly.
O. "I thought you said you would."

No answer. Tongue wags back and forth between her lips.

O. "You like flowers, dont you."
C. "Yes" She was drawing a row of them.
O. "You like to draw them best of anything?"
C. "No"
O. "What do you like to draw best?"
C. "House."
O. "Is that all?"
C. "Yes. Forgot my -" (colors sky blue)

"We can make clouds by leaving white spaces. See! There's a pretty one - another. You make lovely clouds. Isn't it pretty!"

C. "Yes."

She had caught the idea immediately by mere suggestion, and seemed to plan and appreciate the effect.

Lorraine T.
Mar. 19
Lorraine 2:00 - 2:13.

CONVERSATION

5 No.18- Lorraine T—. April 15. 1930
Time 11:05-11:22

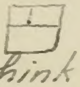
O. "Let us have a margin. Make it the way Jane did hers."

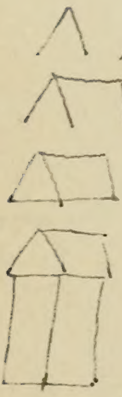
C. "Yes"

O. "Make the dots in here. Good!"

Begins immediately with green crayon. Makes trunk by beginning with a small line and adds to it until the desired size.

O. "Join the big limbs onto the tree good and solid. One can go over the other too."

Draws house. Adds door, window in side, one in front  Uses. Chalk for white curtains.



O. "I think I know what that is."

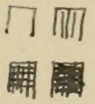
C. "What?"

O. "White curtains."

Makes brown door knob- and green shutters.

O. "Pretty."

Draws lines for shingles very carefully. Colors in lightly with brown. Adds chimney and bricks. Colors house red from bottom to top. Is very careful when near edge. Begins sky. Crayon is worn down to paper, but she does not take paper off. Did it for her. Leaves clouds as in previous picture



O. "I like the way you leave clouds. When did you learn how? Did some one show you how?"

C. Seems to be trying to think. "You did."

Lorraine T.
Apr 15
11:05 – 11:22

INDIVIDUAL STUDY

Rachel C——. Age Oct. 1. 1929 -- 5 y - 0 m.

Parents - French Father - mason tender
Home - simple - neat - not especially artistic
French spoken almost entirely. Mother speaks little English.
Grade I - Kindergarten. School B.
Right handed.

ANALYSIS OF DRAWINGS

Oct. 21.	15 min.	man - carts - bananas
Nov. 20	15 "	man. house - bananas - apples.
Jan. 6	15 "	boy. house. C. tree. flowers.
Feb. 2	13 "	man, house. box - flowers - sidewalk - furniture
Apr. 28	12 "	man, house - flowers - sun - furniture.

Difficulties 4 points
Sociability 3. "
Observation 2 " also Digression and Self-criticism
Imagination 1 " " {Reasoning - Memory
Egotism and Motor Control

Some might question the point given for Motor Control, but she does some work which calls for use of small lines, consequently fine muscular coördination, though results are sometimes crude.

Sequence and talent have been considered 0 - zero. Little advance in schema and composition has occurred

Rachel C—. (continued)

INTELLIGENCE TESTS

	I.Q.
Goodenough -	120
Rhode Island -	45 -
Pressey -	127

From a careful review of the drawings of this little girl, and analysis of "mental content" from information gathered it is safe to say that no ability in art - that is - in drawing, is present. Then, if the Goodenough and Pressey tests, even, can be relied upon, it is upon their ability to measure general intelligence rather than the special art ability.

PROGRAM FOR TEACHERS

After a study such as this, one realizes that each child has problems entirely individual. Without time for follow up study we can make only suggestions for remedial work. The present writer rarely played the rôle of instructor; that was aside from the purpose of this study, but she feels that the method of study employed has resulted in a store of knowledge and rapport which would make the guidance of this child as well as of others comparatively easy. The wall of reticence at first encountered has been broken. The next step would be to encourage the expression of sequential thought, both in words and in drawing. The classroom teacher has the best chance to bring about that situation. Praise any progress, then lead the child in self-criticism.

THE LITTLE BLUE BOOK

Name - R-C-. Address - 19 G- — St.
Father Isadore Occupation - Mason tender

1. None. Younger - twins and a baby

2. Mother sews for the family. All aunts embroider. Father paints houses.

3. She draws at home. Has crayons and blackboard. Colors in the book.

4. Favorite toys are, - a real duck that swims, books, dolls, ball, sled, swing, skip rope, doll carriage, baby doll crib, table and chair.

5. Saves valentines, some drawings, doll clothes. Little treasure box of everything.

6. Never takes apart anything but examines everything.

7. Plays 'ring around a rosy' - 'Sail a boat'.

8. Dresses up like a lady. Imitates and makes believe she is a sandman.

9. Makes up stories. Tells dreams. Dreams about grandma - that she had a red dress.

10. Yes. We tell French stories and sing French songs. Draw for her when she ask how to make things.

11. To the willows, to church - Christmas Nativity. Went to Canada two years ago, and saw chickens cows, horses, pigs, sheep etc. Never to movies.

12. Washes dishes, dusts furniture, tends the baby like a mother. Likes one twin better. Goes to the

store. Says she wants to play the piano. She had a little piano when small, but it is broken. She fell and broke her nose. Would like to skate on the ice but is too little. Can roller skate.

REMARKS.-

This should be, by no means, secret information. The very fact that the child knows we have the interest in her personal home interests renews the spirit of the child. A love and trust thus inspired, frees the hand as well as the tongue. The child will be more daring and glad in self-expression. The record of these interests and experiences should be referred to, used, and added to as frequently as is possible. Make the childs out of school and in school life, as much as we can, - a unit.

This little girl needed much practice in speaking English, as French was mostly the home language. Graphic expression of oral English links up word and object better than a dictionary picture ready made. Possibly a dozen expoures of a ready made picture story does scarcely impress the child with the meaning as much as one self-made picture.

In this brief little write up of home interests we have enough material to keep the child happily busy for many months. We give topics of general interest for self-expression in graphic form. The whole class does them. But are we doing enough with individual differences and difficulties?

CONVERSATION

No. 7. R— C—. Oct. 21. 1929

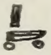
Time 10:30 - 10:45.

C. "What color will I take?"

O. "What is your picture?"

C. "I can make a big man." (Draws large green circle.)
Adds eyes - nose - mouth - ears.

C. "I'm going to make his hat."
Adds feet and legs.

O. "Don't forget to tell me the story."
Drawing -  "That's a cart."

C. "I'm going to make every color here." (Names them by pointing to them in the box - but not as named.)

C. "Right here's red" (But uses green)
Name the colors for me. (Paid no attention.)

C. "Banana my mother showed me. I didn't make yellow. I forgot." (silence) - "Gon-a take orange." (Watches André as he comes up stairs - then looks at me.)

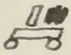
O. "You are not telling me much about it."

C. "It's heat for him"

O. "For whom?"

C. "For the man."

O. "What color do you like best?" (Points smiling to red.)

C. "I'm going to make a little cart here. Gon-to color it right here  purple. That's all."

O. "You may choose anyone you wish, - perhaps Jean."

C. "I'll choose Pauline."

CONVERSATION

No 7. R- C- Nov. 20- 1929

Time 10:30--10:45

C. Here's a apple. (Purple)
(Puts eyes, nose, and mouth with red.)
O. What's that?
C. "A man - a baby. I'll put his hat."
(Goes back to color apple green.)
C. "Over here's going to be all the apples."
(Chooses different colors)
O. "What did you draw for me last time R-."
C. "Two men, and two cars, and two bananas."
O. "What color do you like best?"
C. "Orange. Draw a house."
O. "What color?"
C. "I'll do it red. - steps. I'll make a big step. I do some bananas again."
O. "All right"
C. Smiles up and says, "I'll do some colors."
(Showed her how to color all inside the apples.)
O. "You may call Dorothy now if you wish."
C. "I'll draw ? (inaudible). I can draw a lot of bananas, away over here, and away over here."
(Works away silently some time, but looks up often)
C. "I did only two times orange."

Rachel C
x/6i 20
10:3

CONVERSATION

No 7. R— C—. Jan. 6 - 1930

Time 11:15 - 11:30

O. "Did you want to draw for me R— ?"
(Nod only in reply)

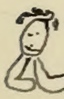
Daniel came by - saying, "I was all sheiked up this Christmas, - green suit, green pants, tie -, shirt." (Then counts legs on the bench.)

O. "All right, honey, what are you drawing?"

C. "Two houses"

Daniel, "I got some white shoes."

C. "There's a Christmas tree. . My mama says its a nice Santy Claus. Dats da house, dats a flower, and dats Christmas trees. I goin a do a green Christmas tree, too." (All these in the margin.)


O. "Don't you like to draw big pictures?"
(Nods - yes. Draws and laughs.)

C. "He's a little boy with some curls. That's a house. That's the chimney." (with little grunts of effort)

C. "These are the stockings hanging up. I had some candy in my stocking and some apple, and an orange."

O. "Lovely!"

(Arranges crayons. Chooses orange for two stockings.)

C. "Dats da window". (Draws line across bottom.)

C. "This is da grass" (Uses orange.)

O. "Your sweater is pretty, isn't it!"

C. "My mother bought it. You did the little man on your paper, didn't you!"

Man coughed. "Mr Hussy." she whispered.

(continued)

C. Names the drawings at the top of the page again. "There the Christmas trees, this is the sidewalk, these da houses, an' dis da flowa."

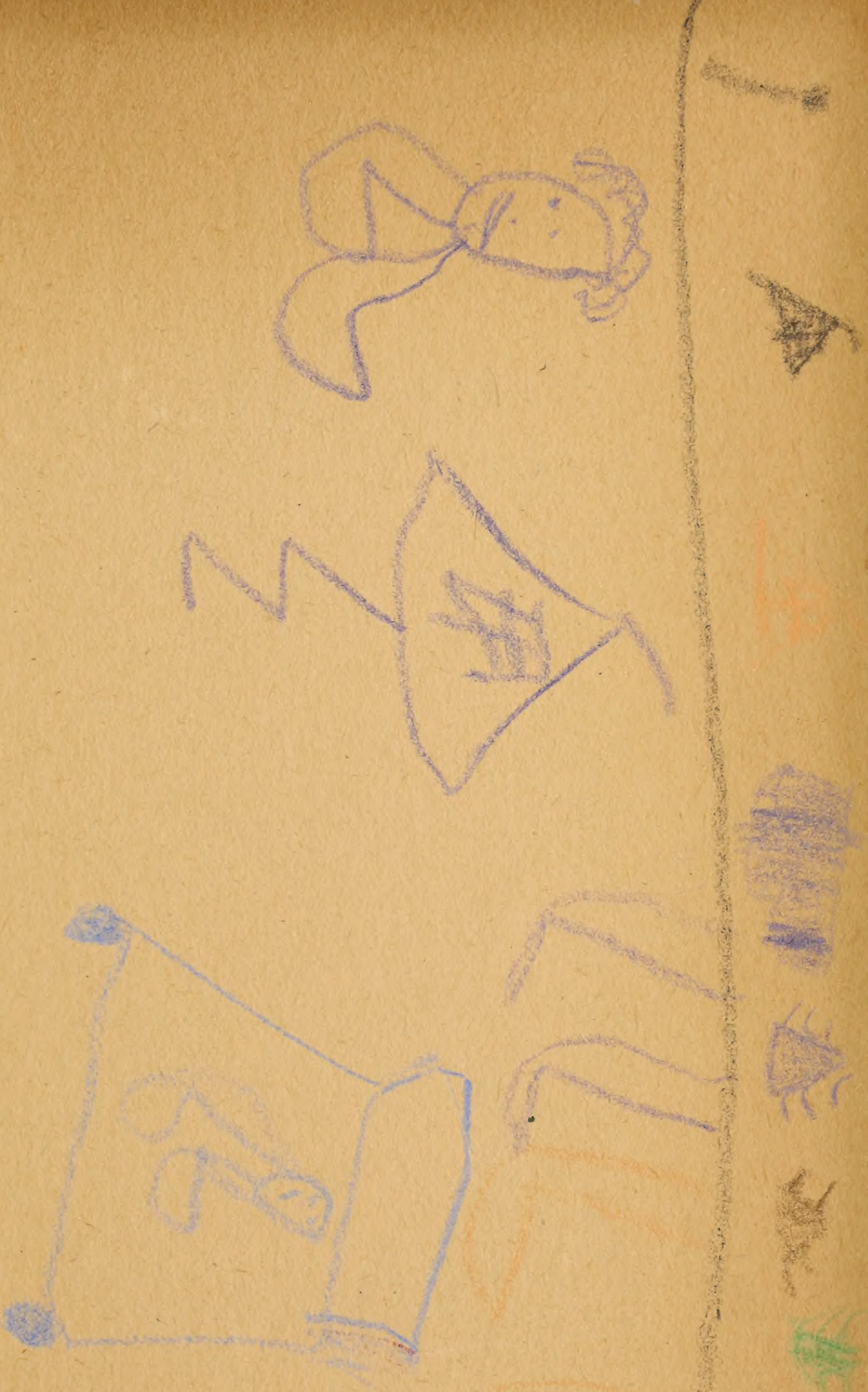
(Finished coloring)

O. "That's all?" (Shook head for "no".)

C. "I'm going to do the picture."

Down came Daniel. "I got a fire department. I don't know how I'll draw it."

C. "It marked red. . . Those are the wheels. There. I'm done."



Rache C

Ja[illegible] 6- 1930

CONVERSATION

No 7. R- C- Feb 2. 1930

Time 2:17 – 2:30

O. "Do you know what you are going to do?"

C. "Yes. I make some flowers . . . I live on G— Street."

(Makes twenty-four orange flowers across paper, then chooses blue crayon.)

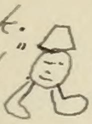
C. "I don't know what to draw. This is the box."

O. "If that is outdoors what is up there." (At top.)

C. "I don't know. I can't remember. . . . . . The sky . . I'll make a little up here."

Hold the crayon under your hand, like this. She changed to her way of holding. Showed again.

C. "All right",-but changes back.

C. "He's walking with his head."  (Draws arms from head.)

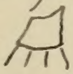
O. "What's that?"

C. "A house."

O. "I know it is a house."

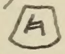
C. "A chimney. See! There's a chair."

O. "What is that outside the chair?"

C. "That's a picture of the chair. Goin' to color it. . . . That's table.  That's all."

O. "That's a pretty good lot."

C. "Not ready to stop. I've got to do the bed."

O. "That's a bed, isn't it?" .

C. "No. That's a chair. I don't know how to make a bed. I'll make it a bed- see! That it. I know how to make a bed now. I guess that is all."

Rachel C.

Feb 2

2:17 - 2:30

CONVERSATION

No. 7 R— C—. Apr. 28. 1930

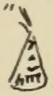
Time 10-07- 10:12

10:20 - 10:27

C. Crayon fell. "It slipped out of my hand. . . It's a chair and a table."

O. "What are they in?"

C. "A window."

O. "This?" 

C. "That's a house."

C. "We did some flowers like that before in school. I forgot the grass."

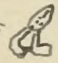
(Was called up stairs by school doctor.)

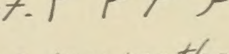
C. "Have to color the flowers." We have some flowers like that."

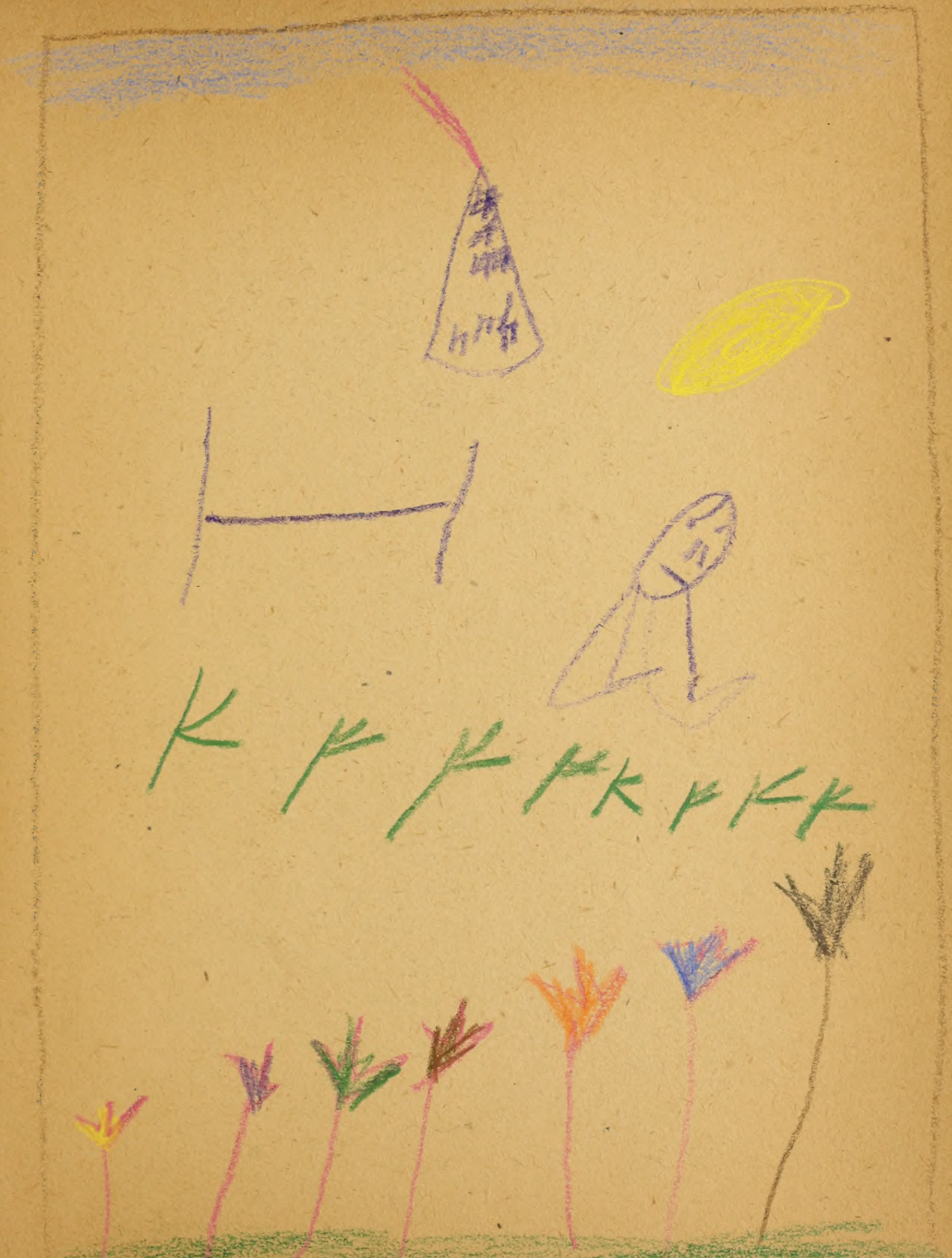
O. "You have some?"

C. "My mother has some."

O. "Those are pretty, aren't they."

C. Swinging crayon. "I don't know. Don't know the name." Miss B— (teacher) knows. (Draws . looks up and smiles. Puts on sky.)

C. "We're going to have flowers like that. . We're going to have flowers like that 'cause my mother's going to buy some."



Rachel C.
Apr 28
10-07 - 10:12
[illegible] - 10:27

FURTHER CONCLUSIONS

Following the foregoing observations, conclusions may be drawn, though tentative, which may help in further study.

1. The Goodenough Intelligence Test, though not claiming to be a test for special ability, is as reliable as the other tests – in determining the presence of talent or art ability.
2. Drawing ability, at least that of little children, does not always show a high correlation with what we at present consider intelligence. That is, according to our present way of discerning and scoring intelligence, art ability is sometimes outside of the field of intelligence. One or the other of these may be a stride ahead.
3. If the Goodenough Test scores correlate closely with the Stanford Revision Tests, and results of another test fall either far below or far above the results of the former tests, then the last test fails to be reliable both in measuring intelligence and drawing ability.
4. A "mental content" study can supply the teacher with more valuable information concerning the art capabilities and needs of the individual child than either the viewing of the finished drawing, or the hearing of the child's story about the finished picture. Time spent in this intimate study is in the end time saved and ability salvaged.

5. The child's revelation of mental content through conversation while drawing throws a light upon the child's home interests, experiences, and environment which could not be gotten in any other way. The informative traits in this study were - digression - and sociability

6. The taking of mental content while drawing does not interfere with mental or motor action if judgment is used as to manner of approach, the circumstances of observation, and frequency.

7. Many valuable experiences are constantly becoming a part of the child, and no chance is given to have them simultaneously expressed orally and graphically that the benefits may be multiplied greatly through recall.

8. The child's school life and home life will be more unified and natural if the results of a study as is here demonstrated are shared and become common knowledge of the grade and art teacher.

SUGGESTED PROGRAMME

1. Every teacher should find the opportunity to accumulate knowledge of child art, interests, and experiences- for every one in her room, and chart this knowledge for guidance in teaching during the year.
2. Every class should have a free expression group period frequently when mental content may be exchanged, and the teacher "listens in."
3. Every teacher must look upon "free expression" and "creative ability" as terms which imply an added insight on her part into the emotional life and possibilities of each child as an individual.
4. Every primary teacher should have developed a fair ability in art,- drawing, modeling, and construction,- and have a fair amount of confidence in that ability.
5. Every student teacher should be made somewhat familiar with the most helpful studies which have been made of child art.
6. Every student teacher should have opportunity to personally make a study of child art, with guidance, but freedom of choice as to phase and procedure.
7. Everyone should be thoughtful enough to realize that art for children is not a sugar-plum part of education, but one of the pleasant wholesome foods for the best all-around development.

STUDENT CHILD STUDY

This study was explained to a class of some thirty Freshmen Normal School students. It was suggested that they study in a similar way some child of their acquaintance. fourteen girls volunteered. Others in the class chose other special studies. Not all could easily arrange for a study.

The fourteen girls brought in reports every week, and a half hour was given usually to hearing and discussing drawings, mental content, and other experiences. All the class enjoyed it and benefited.

Children studied included pre-school, kindergarten, and grade one children. All the steps of study were taken, as - Prerequisite Data, giving and scoring of Intelligence Tests, making and filling in Blue Books, the getting of five Mental Content drawings, and a written report of the work.

This is a type of work the present observer thinks every student in teacher-training should have the opportunity to do.

The report found on the next page is one of the interesting ones sent in with the complete study at the close of the school year. The report pictures one girls' experiences with a little American boy during his fifth year. He was in grade one. His I.Q. was quite above the average.

REPORT OF CHILD STUDY

By Doris Vezina - Freshman - Teacher Training - 1929.

This was one of the most interesting experiments I have ever tried, and I got much enjoyment and pleasure from it.

When I first began to take Fred's conversation I found it difficult because he talked continuously as he drew. After the first two or three drawings, (each done at separate times) he was not so ready to talk. Toward the last he was quite unwilling to talk. At the last drawing, however, he was again quite Talkative.

He was always ready and eager to draw "for my teacher" as he thought. Sometimes when I was forgetting, he would remind me with much insistence that he "must draw." Of course this made the work all the more interesting for me. Fred did not know I was writing what he said.

At the beginning the little boy always had something in mind to draw, but toward the last he had to think hard each time before he drew. Even my suggestions would not help. I think he wanted to do something so exceptional "for the teacher" that his subjects seemed limited.

I noticed that although he kept his mind on his work very well, he could sing or talk about other things all the while. When there were any distractions he could always come right back and

go on with his drawing. I believe that was because he liked so much to draw.

One of the most noted characteristics was Fred's great pride in his drawing. He always showed his drawing as he finished parts with remarks like, "Isn't that nice." "Could you make it like that?", etc. I always encouraged this pride because I found that he did much better if he was not criticised too severely.

I hope to continue this study thru the summer if I possibly can. I enjoy it so that I really look forward to it.

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REFERENCE TO BIBLIOGRAPHY

The following bibliography of books which were studied in preparation for, and during the study herein described, may be grouped into three classes, each class, however, somewhat overlapping.

Group I. Psychology of Children.

In preparation for this intensive study, the books here listed were carefully perused, as well as others not here listed. They also gave a better working knowledge for making a Child Problem study. One of the children of this present study was used. Five other children of this study group were observed and given the Stanford Revision individual test.

Group II Measurements in Drawing

A thoro study of the books listed was made and part formed the basis of a term paper. The book by Dr. Florence Goodenough was continually used during the giving of the Goodenough test. Necessarily a most careful study was made of all reports in this field.

Group III. Progressive Education.

That the present author might be acquainted with what has been and is now done in the field of art in the public schools, many more sources than here noted were delved into. The History of Art in the Schools of Massachusetts was a paper written which made use of some material.

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